

SEPTEMBER 2003

Federal PROBATION

*a journal of correctional
philosophy and practice*

**SPECIAL ISSUE:
SUBSTANCE ABUSE
TREATMENT**

Drug Treatment in the Community
By Faye S. Taxman, Jeffrey A. Bouffard

Social Support Networks in Outpatient Drug Treatment
By Mark D. Litt, Sharon D. Mallon

Hepatitis C Among Offenders
*By Scott A. Allen, Josiah D. Rich, Beth Schwartzapel,
Peter D. Friedmann*

An Employment Intervention for Drug-Abusing Offenders
*By Carl Leukefeld, Hope Smiley McDonald, Michele Staton,
Allison Mateyoke-Scrivner, Matthew Webster, TK Logan, Tom Garrity*

Co-Occurring Substance Use and Mental Disorders in Offenders
By Stanley Sacks, Frank S. Pearson

Amenability to Treatment of Drug Offenders
By Douglas B. Marlowe, Nicholas S. Patapis, David S. DeMatteo

Sanctions and Rewards in Prison-Based Therapeutic Community Treatment
*By William M. Burdon, Michael L. Prendergast, Vitka Eisen,
Nena P. Messina*

Treatment Research in Oz—Is Randomization the Ideal or Just Somewhere
Over the Rainbow?
By Steven S. Martin, James A. Inciardi, Daniel J. O'Connell

Moving Towards a Federal Criminal Justice "System"
By Timothy P. Cadigan, Bernadette Pelissier

Reorganizing Care for the Substance Using Offender
By Peter J. Delany, Bennett W. Fletcher, Joseph J. Shields

Federal PROBATION

*a journal of correctional
philosophy and practice*

PUBLISHED BY

The Administrative Office of the United States Court

Leonidas Ralph Mecham, Director

John M. Hughes, Assistant Director
Office of Probation and Pretrial Services

Federal Probation ISSN 0014-9128 is dedicated to informing its readers about current thought, research, and practice in corrections and criminal justice. The journal welcomes the contributions of persons who work with or study juvenile and adult offenders and invites authors to submit articles describing experience or significant findings regarding the prevention and control of delinquency and crime. A style sheet is available from the editor.

Federal Probation is published three times a year, in June, September (on a special topic), and December. Permission to quote is granted on the condition that appropriate credit is given the author and Federal Probation. For information about reprinting articles, please contact the editor.

Subscriptions to Federal Probation are available from the Superintendent of Documents at an annual rate of \$16.00 (\$22.40 foreign). Please see the subscription order form on the last page of this issue for more information.

EDITORIAL STAFF

Timothy P. Cadigan, Executive Editor
Ellen Wilson Fielding, Editor

Federal Probation

Administrative Office of the U.S. Courts
Washington, DC 20544
telephone: 202-502-1600
fax: 202-502-1677

Postmaster: Please send address changes to the editor at the address above.

ADVISORY COMMITTEE

special advisor

Merrill A. Smith

members

Dan Richard Beto

Correctional Management Institute of Texas
Huntsville, Texas

John W. Byrd

United States Pretrial Office
San Antonio, Texas

Honorable James G. Carr

United States District Court
Toledo, Ohio

Alvin W. Cohn

Administration of Justice Services, Inc.
Rockville, Maryland

Ronald P. Corbett, Jr.

Executive Director, Supreme Judicial Court
Boston, Massachusetts

Thomas Henry

United States Pretrial Office
Newark, New Jersey

Magdeline Jensen

United States Probation Office
Tucson, Arizona

Jolanta Juskiewicz

Pretrial Services Resource Center
Washington, DC

Honorable David D. Noce

United States District Court
St. Louis, Missouri

Joan Petersilia

University of California, Irvine
Irvine, California

Faye Taxman

University of Maryland
College Park, Maryland

THIS ISSUE IN BRIEF

This September's issue of Federal Probation explores the state of knowledge about substance abuse treatment in the criminal corrections field. Our guest editor, Faye S. Taxman, is Director of Governmental Research and Associate Research professor of Criminology and Criminal Justice at the University of Maryland, College Park, and the author of many incisive articles on criminal justice and supervision issues for this and many other publications. In the pages that follow, she gathers together leading researchers in the field of treatment and criminal justice. We hope our readers will be heartened and challenged by recent strides in ascertaining just what constitutes productive treatment methods for this population.

Introduction

The empirical evidence for the efficacy of drug treatment for offenders is well-established. Clinical interventions, particularly those founded on therapeutic communities or cognitive-behavioral processes, have repeatedly been shown to reduce the substance use and offending behaviors of offenders. The contemporary questions that loom in the criminal justice field are: 1) how best to provide the drug treatment services; and 2) what supportive interventions are needed to sustain the gains the offender made while in drug treatment.

This special edition of *Federal Probation* is designed to explore some of the more critical issues surrounding delivery to offender populations of drug treatment services that will ensure long-time reductions in relapse into both substance abuse and illegal conduct. Researchers invested in advancing the field of drug treatment by exploring some of the difficult issues have contributed to this edition. We thank them for their contributions and the work that their research sites are involved in to improve the quality of treatment services provided to offenders.

Four articles examine the need for services that will increase the likelihood that offenders have improved outcomes. Mark Litt and Sharon Mallon describe the role of social support networks in achieving success treating drug-involved offenders. The scholars describe the need to assist offenders in developing social milieus that support abstinence in their daily lives. Twelve-step (12), Community Reinforcement Approaches (CRA), and Network Therapy efforts are described, along with the available research on each.

Carl Leukefeld, Hope McDonald, Michele Staton, Allison Mateyoke-Scriver, Matthew Webster, TK Logan, and Tom Garrity describe a NIDA-funded study on an employment program for drug court offenders. The study is designed to integrate employment services as part of the drug treatment programming. The three-pronged strategy—obtain, maintain, and upgrade employment—is integrated into the drug court. The employment needs of these offenders are discussed in this paper, as well as an innovative strategy to address these needs.

William Burdon, Michael Prendergast, Vitka Eisen, and Nena Messina examine the need to improve client motivation for participation in drug treatment programs. The scholars use prison-based therapeutic communities to describe strategies to address client motivation, including a structured approach to sanctions and rewards. In this article, the importance of the compliance-gaining strategies as a motivational enhancement are described, as well as some approaches that are being examined in some of their ongoing work. The difference between correctional and therapeutic responses is both discussed and operationalized in the context of a treatment program.

Faye Taxman and Jeff Bouffard continue their work on the nature and context of drug treatment services for offenders. Their article reports results from a qualitative study of drug treatment services offered to offenders in four jurisdictions as part of their drug court programming. Observations and survey data highlight some of the issues in providing drug treatment services to the offenders. The tendency of the clinical staff, across four disparate jurisdictions, to employ a wide range of treatment strategies appears to affect the retention rate in these programs. The researchers highlight the need for more research to understand how offenders respond to more eclectic programming, and emphasize that drug court systems must use quality assurance techniques to ensure integrated programming.

Two other articles discuss issues relating to providing services to offenders. Scott Allen, Josiah Rich, Beth Schwartzapfel, and Peter Friedmann discuss the Hepatitis C virus epidemic among offenders and its impact on drug and health services treatment programming. Since Hepatitis C infection can be found in up to 40 percent of the correctional population and a high proportion of those with substance abuse disorders, effective programming must address the medical needs of the infected offender. Additionally, before infected offenders can undergo the ordeal of Hepatitis C treatment, substance abuse and mental health conditions must be effectively stabilized through the delivery of appropriate drug treatment and mental health programming for appropriate candidates.

Doug Marlowe, Nicholas Patapis, and David DeMatteo discuss the legal and clinical factors that are relevant to making determinations about offenders' amenability to treatment. Many drug treatment programs for offenders have a condition that the offender must be "amenable." Yet, little is known about this concept. The scholars explore how the "past predicts the future" in the concept of amenability, and lay out an agenda for future research into the concept.

Much of the research in the past few years has concentrated on how to provide drug treatment services within the context of the criminal justice system. The focus on systems is an attempt to address not only the access to services but also retention in said services. Three articles are devoted to this concept. First, Peter Delany, Bennett Fletcher, and Joseph Shields provide a conceptual framework for integrated systems. The other two articles explore the continuum of collaborative structures to organize drug treatment and criminal justice services. They discuss some of the horizontal and vertical systems that are involved in implementing these approaches.

Tim Cadigan and Bernadette Pelissier discuss the efforts of the federal partners within the Bureau of Prisons and the Administrative Office of the U.S. Courts to integrate drug treatment services for offenders. The authors present a systems model, and then describe the system-building efforts that the federal agencies are engaged in as part of an attempt to ensure a continuum of care as offenders move through different components of the federal correctional system.

Stan Sacks and Frank Pearson explore co-occurring disorders (mental health and substance abuse) among offender populations and discuss the treatment needs of such offenders. Based on their review of the literature, they discuss principles of effective treatment, especially how integrated services are needed within different correctional settings—jail, prison, probation, parole, etc. Examples of programming are presented and some promising evaluation research studies are discussed. They conclude with recommendations for the criminal justice field relating to this difficult-to-treat problem.

Steven Martin, James Inciardi, and Daniel O’Connell make the argument for more quasi-experimental design to ensure that the research findings that guide policy and practice are grounded in reality. The scholars identify the limitations of randomized studies, and illustrate how multivariate models can be used to estimate treatment effectiveness and compensate for real-world differences. The issues that are raised are critical as steps in moving from research to practice, because the field needs studies that help us understand the conditions under which the research findings can be replicated in the real world. Well-designed studies, even those that do not include randomization, can provide some of the answers if accepted by the research and practitioner community.

Advancing the field of drug treatment in the criminal justice system will require attending to many of these programmatic, organizational, and system issues. The field has moved past the discussion of “does treatment work” to “how to optimize the benefits from drug treatment” services. This set of articles provides some of the most current efforts to advance the dialogue about critical factors that affect the sustainability of the benefits from participating in drug treatment services.

Faye S. Taxman
Guest Editor

TABLE OF CONTENTS

Drug Treatment in the Community—A Case Study of System Integration Issues	4
<i>By Faye S. Taxman, Jeffrey A. Bouffard</i>	
The Design of Social Support Networks for Offenders in Outpatient Drug Treatment	15
<i>By Mark D. Litt, Sharon D. Mallon</i>	
Hepatitis C Among Offenders—Correctional Challenge and Public Health Opportunity	22
<i>By Scott A. Allen, Josiah D. Rich, Beth Schwartzapfel, Peter D. Friedmann</i>	
An Employment Intervention for Drug Abusing Offenders	27
<i>By Carl Leukefeld, Hope Smiley McDonald, Michele Staton, Allison Mateyoke-Scrivner, Matthew Webster, TK Logan, Tom Garrity</i>	
Co-Occurring Substance Use and Mental Disorders in Offenders— Approaches, Findings and Recommendations	32
<i>By Stanley Sacks, Frank S. Pearson</i>	
Amenability to Treatment of Drug Offenders	40
<i>By Douglas B. Marlowe, Nicholas S. Patapis, David S. DeMatteo</i>	
Sanctions and Rewards in Prison-Based Therapeutic Community Treatment	47
<i>By William M. Burdon, Michael L. Prendergast, Vitka Eisen, Nena P. Messina</i>	
Treatment Research in Oz—Is Randomization the Ideal or Just Somewhere Over the Rainbow?	53
<i>By Steven S. Martin, James A. Inciardi, Daniel J. O’Connell</i>	
Moving Towards a Federal Criminal Justice “System”	61
<i>By Timothy P. Cadigan, Bernadette Pelissier</i>	
Reorganizing Care for the Substance Using Offender— The Case for Collaboration	64
<i>By Peter J. Delany, Bennett W. Fletcher, Joseph J. Shields</i>	
Contributors to This Issue	69

The articles and reviews that appear in *Federal Probation* express the points of view of the persons who wrote them and not necessarily the points of view of the agencies and organizations with which these persons are affiliated. Moreover, *Federal Probation’s* publication of the articles and reviews is not to be taken as an endorsement of the material by the editors, the Administrative Office of the U.S. Courts, or the Federal Probation and Pretrial Services System.

Drug Treatment in the Community— A Case Study of System Integration Issues¹

Faye S. Taxman, Ph.D.

University of Maryland, College Park

Jeffrey A. Bouffard, Ph.D.

*Department of Sociology and Anthropology
North Dakota State University*

WITH SLIGHTLY over 6.5 million Americans now under formal criminal justice control (in jail, prison or on probation or parole)—one-third to half of whom have substance abuse disorders—the demand for treatment far outweighs availability. In 1996, only 13 percent of state inmates were receiving treatment. More important, the type of treatment provided in justice settings is insufficient for chronic users. Nearly 70 percent of prisoners who receive treatment report attending only self-help groups or psycho-educational meetings, which are often inadequate for addressing the needs of persons with more severe substance-abuse disorders (Mumola, 1999; Belenko, 2002b). Similar needs-service mismatches are evident among offenders under probation supervision. Over 50 percent of the 4.5 million offenders under probation supervision have conditions of release that require substance abuse treatment; only 17 percent of these received drug treatment while on probation (Mumola, 1998; Bonczar, 1997).² Moreover, most of these services are inappropriate for the individuals' level of need, with many of the services being nonclinical (e.g., drug testing, drug education, self-help). And, nearly 40 percent of new prison intakes are due to technical violations from probation or parole supervision,

largely due to substance abuse-related problems—a trend that exacerbates problems of prison crowding (Taxman, 2002; Bureau of Justice Statistics, 2000).

Addressing inadequacies in the offender treatment system will involve in part absorbing lessons learned from the extensive knowledge base on the general drug treatment delivery system developed over the past 30 years. NIDA-sponsored national studies such as the Drug Abuse Reporting Program (DARP), the Treatment Outcome Prospective Study (TOPS), and the Drug Abuse Treatment Outcome Studies (DATOS), and research programs funded by SAMSHA and CSAT such as PETS (Persistent Effects of Treatment Studies) have substantially increased our understanding of effective interventions and systems of services during this period. Policymakers, practitioners, and researchers have been able to turn their attention in recent years to encouraging wider acquisition of this knowledge and adoption of these evidence-based practices among general treatment practitioners (Backer, David, & Soucy, 1995; Chao, Sullivan, Harwood, Schildhaus, Zhand, & Imhof, 2000; Lamb, Greenlick, & McCarty, 1998; National Institute on Drug Abuse, 1999). Almost none of these efforts however, have focused specifically on the criminal justice field, including the thorny issues associated with the varying philosophies of a service-oriented treatment system and the justice system. Of the nearly 70 published articles from DATOS (Simpson, 2002), five were specific to the criminal justice offender (Farabee, Joshi, & Anglin, 2001; Farabee, Shen, Hser, Grella, & Anglin, 2001;

Knight, Hiller, Broome, & Simpson, 2000; Hiller, Knight, Broome, & Simpson, 1998; Craddock, Rounds-Bryant, Flynn, & Hubbard, 1997). The picture painted by existing empirical data on the offender treatment systems is a captivating but incomplete collage that poses more questions than it answers.

With the majority of offenders participating in drug treatment outpatient programs in the community setting, a study of how these services are provided to the offender population is warranted. The drug court concept, as implemented in a variety of settings, provides the opportunity to explore how treatment is integrated into the drug court setting, and how the community treatment system provides services to drug court offenders. A study funded by the National Institute on Justice was intended to rigorously explore the organizational and structural issues regarding the use of treatment services and the subsequent impact of treatment delivery on client outcomes. In other words, how are drug treatment services provided within the framework of the drug court? What practices drive the drug court in recognition of the importance of treatment? This article will use the study findings to describe and discuss some of the issues surrounding drug treatment services provided to offenders in the community setting.

Drug Treatment in Drug Courts—The State of Knowledge

Recent studies of drug treatment courts have started to explore the issues about the provision

¹This project is sponsored by The National Institute of Justice under Grant No. DC VX 0008. All opinions are those of the authors and do not reflect the opinion of the sponsoring agency. All questions should be directed to Faye S. Taxman at 301-403-4403 or at ftaxman@bgr.umd.edu. The authors would like to acknowledge that Dr. Don Anspach and Andrew Ferguson from the University of Southern Maine contributed to this project.

²Data pertaining to drug conditions and treatment for the probation population is readily available through the Bureau of Justice Statistics' Survey of Adults on Probation. No comparable national survey of the parole population is available.

of treatment services. Several major studies have been conducted that employ sound research methods to explore the efficacy of drug courts, and to measure the services delivered to offenders (Harrell, Cavanaugh & Roman, 1998; Goldkamp, et al., 2001; Peters & Murrin, 1998; Gottfredson, Najaka, & Kearley, 2002). In each of these studies, the percentage of drug court clients participating in treatment services varied considerably from 35 to 80 percent. The length of time in treatment also varied, from under 30 days to over two years. The general finding appears to be that the longer the period of time in treatment, the greater the likelihood that the offender will graduate from drug court. And, more importantly, participation in drug treatment services, not necessarily just the drug court, reduces the likelihood of rearrest. Banks and Gottfredson (2003) found that 40 percent of the drug court offenders that participated in treatment were rearrested within a two-year window as compared to slightly over 80 percent of the drug treatment court offenders that did not participate in treatment. Goldkamp, White and Robinson (2001) found that the more treatment sessions participated in or the greater the percentage of time in treatment during the drug court program, the greater the reduction in rearrests.

Two studies have examined the interaction between the justice and treatment agencies. Turner and her colleagues (2002) at RAND in a process study of 14 drug treatment courts confirm that drug court offenders have difficulties accessing treatment services in the community. In this study, the researchers found that the linkages between the drug treatment court and drug treatment system tend to be characterized by informality, where the court accesses available services but the drug treatment court and services are not well-integrated beyond these small-scale, often informal ties. Taxman and Bouffard (2002a), in their review of the data from a survey of 212 drug courts, assess the disjuncture between the delivery of treatment services and drug court operations. In key areas, the drug court respondents highlighted the lack of policy and procedures that support the drug court's mission of providing treatment services for offenders. For example, drug courts tended to target eligibility for drug court based on the offense and criminal history, rather than the type or severity of their substance abusing behavior. Half of the drug courts reported that

they have non-clinical staff screen clients for drug treatment court eligibility, and nearly 60 percent of the drug treatment courts excluded offenders from participation who were "not motivated for treatment." While drug courts are designed to integrate services across systems, the survey results found that few courts have developed such an approach. This raises many questions about the treatment services provided to offenders in the drug court setting and the impact of such services on outcomes.

Methodology

This study of drug treatment delivery in drug courts uses a combination of qualitative and quantitative methods to examine drug treatment and drug court operations in four relatively long-standing drug courts. Fieldwork was conducted from February 2001 to May 2002. On-site interviews were conducted with all dimensions of the drug court (e.g., judges, probation officers, defense attorneys, prosecutors, treatment administrators, and providers). Surveys were undertaken with 52 counseling staff employed by the treatment agencies and a total of 124 treatment sessions were also observed, using a structured tool designed to measure the nature and quantity of various clinical components of substance abuse treatment. A retrospective analysis of 2,357 drug court participants also was conducted to explore the impact of treatment participation on graduation rates and program rearrest and post-program rearrest.³

Sites

The sample of drug courts examined in this evaluation includes two located in relatively rural areas and two located in more urban settings. All four drug-court sites were chosen because their programs had been in operation long enough for their procedures to be institutionalized. In fact each of the courts was designated as a "Mentor Court" by the National Association of Drug Court Professionals. Site 1 is a small court operating in rural Louisiana, with a dedicated treatment provider that is part of the local county government. Site 2 is also a small, rural court operating in Oklahoma, which at the time of the evaluation was using two small private treatment providers within the community. Site 3 is a relatively large, long-running court in a medium-sized California city, which utilized existing drug treatment providers within the local community. Site 4 is a large court operating in a medium-sized Midwest city and used a dedicated public health treatment provider that was part of the court itself.

Retrospective Analysis of Drug Court Participants

The study included a retrospective analysis of 2,357 offenders enrolled in drug courts between January 1997 and December 2000. The sampling frame consists of all enrollees in drug courts, regardless of their level of participation, as long as they took part in a drug court for more than a day. Information about offender behavior and program participation was collected during their program participation (i.e., drug testing, treatment, sanctions, and graduation) and rearrest data was gathered for the 12-month post-program period. Rearrest data was gathered from the National Crime Information Center (NCIC) for all of the sites. For the most part, the most complete information was maintained by the treatment providers (as compared to the courts) and therefore the retrospective analysis tends to over-represent those drug court participants who actually attend their mandated drug treatment services.

Procedures for the Qualitative Components of the Study

As part of this study, the researchers examined the treatment components of the drug court program to learn more about the actual nature of services provided. Survey data as well as structured observations were the main techniques to gather information.

Observation of Treatment Services. Using weekly schedules provided by the treatment program administrators, the evaluation staff developed an observational schedule that maximized the number of meetings that could be observed during a four-day on-site visit. A total of 124 sessions were observed, which was approximately half of the scheduled sessions during the on-site visits. During each site visit, trained observers were assigned to unobtrusively observe treatment meetings at the various programs in the jurisdiction. Observers recorded the amounts of time (in minutes) spent on treatment topics and activities.

Counselor Surveys. Treatment program administrators also provided a list of staff who were directly involved in the delivery of services to drug court offenders. During the site visit, the researchers provided each of these counselors with a survey packet that was to be returned by mail. A total of 54 of the 92 counselors (58 percent) completed the survey. The items comprising these two questionnaires largely mirror those developed by Taxman, Simpson and Piquero (2002), including items representing conflict, labeling, social control, social learning, social dis-

³The methodology used the retrospective study to examine program compliance, completion, and recidivism for offenders participating in the drug court. A prospective study occurred with the treatment system to explore some of the issues related to the delivery of treatment system. Refer to Taxman, et al. for a discussion of the methodology (2002).

organization and other theories, including cognitive-behavioral (CBT) approaches.

Summary of Main Findings

Characteristics of the Drug Treatment Courts

The four drug courts included in this study adapted the general features of the drug court model to fit their particular needs. The courts for the most part were post-plea, except for site 4 (pre-plea). The courts used the existing judicial infrastructure to deliver services, holding status hearings weekly, except in site 2, where the hearings occurred twice a month. None of the four courts had a structured set of sanction protocols (i.e., graduated sanctions menus). Except for site 3, drug testing was administered by the treatment service agencies, with the treatment system sharing information on the testing results with court personnel. Drug testing tended to be more frequent in the early phases of the drug court program and was generally less intense as clients progressed in the program.

Treatment services were delivered either by an array of local providers (sites 2 and 3) or by a special treatment provider that had been contracted by the court (sites 1 and 4), as specified in Table 1. Both models of service acquisition included some access to residential drug treatment services if needed. Treatment services were offered during the full duration of the drug court period, ranging from 12 to 15 months, a treatment duration that is consistent with the recommendations of the National Association of Drug Court Professionals (1997). The drug treatment providers tend to be community-based organizations that are part of either the public health system or private agencies. Many offer a variety of services, including group counseling, relapse prevention (later phases), social and coping skills, and case management services. Support services are often offered through the local self-help community (AA, 12-step programs) in each jurisdiction. In one site the treatment providers have a formalized treatment curriculum to guide the treatment services. The use of a formalized curriculum has been suggested to be an important component of effective treatment services (Lamb, Greenlick & McCarty, 1998). None of the courts used a closed group format for treatment services (see Table 1).

Each court has a different process for determining who is eligible for participation in the drug court program. In two sites, the initial legal review of a case (of current offense and criminal history) is performed by prosecutors (sites 2 and 4), while probation performs this review in the other two sites (sites 1 and 3). None of the sites used a standard risk tool to guide the legal decision.

The legal screening generally precedes the clinical screening/assessment; the decision-making process means that the severity of the substance abuse need is usually secondary to the participant's legal (offense and history) eligibility.

Characteristics of the Participants in Drug Treatment Courts

Table 2 presents the characteristics of the offenders participating in the four drug courts. Drug court participants tended to be male, with an average age range of 29 to 33 years old, and less than a third are employed at the time of placement in drug court. For the most part, offenders in these courts have had a significant criminal justice history, with over 59 percent having two or more prior arrests. Many of the offenders have also had arrests for personal and property offenses. The instant offense tends to be a drug crime, with a majority of the offenses being felonies. Prior substance abuse treatment experience varied by site, from 18 to 48 percent of participants.

Compliance with Drug Treatment Court Requirements

In the four drug courts under study, the typical offender participated in the following weekly activities during the initial stages of the drug court program, generally for the first two months: two drug tests, two or three treatment sessions (for 90 to 120 minutes each), and one status hearing (except at site 2, where the status hearing was bi-weekly). Some drug courts also required the offender to have contact with the case manager or supervision staff. While the logic behind the structured intervention is compatible with the goals of assisting the addict-offender to become committed to recovery and to be held accountable for his/her behavior, Table 3 illustrates the actual amount of participation in all phases of the program. (No information was available on status hearings in the case or automated files.)

Graduation Rates and Length of Time in Drug Court. The percentage of offenders successfully completing the drug court program ranges from 29 percent (site 4) to 47 percent (site 3). Most surprising is the actual length of time that the offenders participate in the drug court program. In each drug court, the expected duration of the program is 12 months. In this four-drug-court sample, it was common practice for both successful (average duration of 15 months) and unsuccessful graduates (average duration of 10 months) to participate in the program up to four times the expected program length (with a maximum duration of 44 months).

The four courts frequently allow offenders to

extend their time in the drug court program; and, for those with more significant compliance problems, offenders can still be unsuccessfully terminated from the drug court program even though they have exhausted their time obligation in drug court. Across the four drug courts, slightly over 22 percent of the cases of unsuccessful graduates spent more than 12 months in drug court programming. Similarly, 53 percent of the successful graduates of these drug courts participated in the program well past the expected program length, suggesting that the 12-month time frame is generally too short to address the relapsing behavior and addictive nature of the addiction, or that the structured nature of the program is too demanding for many offenders to comply with all components. Alternatively, the components of the program are insufficient to address the recovery needs of the offender.

An analysis of the individual profiles of offenders finds significant differences between the types of offenders that are likely to successfully complete the drug court. In all sites except site 2, Caucasians are more likely to complete than African Americans or Hispanics—a common finding of other drug court programs. Graduates are also more likely to have higher educational backgrounds (high school diploma or above) than unsuccessfully terminated clients. Users of cocaine/crack, amphetamines, and opiates are also less likely to graduate than users of marijuana. In two sites (sites 2 and 3), it was found that participants with a history of prior substance abuse treatment are less likely to graduate than participants who are receiving treatment for the first time. At the two urban locations (sites 3 and 4), it was found that participants with more serious criminal histories are also less likely to succeed in drug court. This pattern suggests that some drug court programs have difficulty in dealing with participants presenting more severe drug using and criminal behaviors.

Drug Testing Compliance. On average, 64 percent of the successful graduates and 81 percent of the terminated offenders test positive at least once during their drug court program experience. Program compliance with drug testing requirements varies significantly but overall those that do not graduate tend to be less likely to meet the drug testing requirements.

Drug Treatment Compliance. Offenders that are unsuccessful graduates are more likely to miss treatment sessions. Overall, 62 percent of the graduates meet at least 75 percent of their treatment sessions, as compared to 21 percent of the offenders that were terminated from drug court. A review of the compliance with treatment

TABLE 1
Cross-Site Comparisons of Drug Court Structure, Operations and Phases

	Site 1	Site 2	Site 3	Site 4
<i>Drug Court Structure</i>	Post-plea, post adjudication	Post-plea, post adjudication	Post-plea, post adjudication	Pre-plea, pre-adjudication
Date of Inception	1997	1997	1993	1993
Program Length	15 months	3,6,9,12 months	12 months	12 months
<i>Status Hearing</i>				
Status Hearings	Weekly	Bi-Weekly	Weekly	Weekly
<i>Drug Testing</i>				
Random Testing	Yes	No	Yes	Yes
Tested By	Treatment	Treatment	External	Treatment
Amount by Phase	2x week, 2 months 2x week, 4 months 1x week, 3 months Monthly, 6 months	2x week, 3 months 1x week, 3 months 1x biweekly, 3 months Random, 3 months	2x week, 2 months 1x week, 4 months 1x week, 3 months	2x week, 2 months 1x week, 4 months 1x week, 4 months
<i>Treatment</i>				
No. of Providers	One Private	Two Private County Health	Multiple Contractors to County Health	County Health
Differentiated Tracks ³	One	2 drug court tracks 4 treatment tracks	One	Six treatment tracks
Phase I	2 months	3 months	4 months	4 months
Phase II	4 months	3 months	4 months	4 months
Phase III	3 months	3 months	4 months	4 months
Phase IV	6 months	3 months	NA	NA
Closed Groups	No	No	No	No
Formalized Curriculum	No	Yes	Yes (some)	Yes
Indv Counseling in addition to Group	No	Yes	Yes	Yes

data illustrates that many offenders who successfully graduate are required to repeat various phases of the court program, with 30 percent of the graduates in treatment for 1.5 times the expected number of treatment sessions.

Rearrest Rates within Program. Of all of the participants, 14 percent of the completers and 42 percent of the terminated clients were arrested during program participation (including the extended time, beyond the 12 month that the offender remained in the program). Sixteen (16) percent of the arrestees were arrested more than once during the drug court program for new

offenses. (Technical violations such as failure-to-appear were not considered in the new arrests.)

Rearrest Rates Post Program. As shown in Table 3, terminated clients are more likely to be rearrested for new offenses than are the program completers. Rearrest rates varied by site, but overall 9 percent of those successfully completing the program and 41 percent of those discharged were rearrested for a new offense within twelve months. Overall, those successfully completing the program took about 6.6 months till rearrest, whereas those terminated took an average of 4.5 months.

Understanding the Dimensions of Drug Treatment Services

The second part of the study explored the nature of the drug treatment services delivered to drug court offenders to understand some of the results from the drug court participation. This section of the study involved the use of surveys and direct observations to quantify the services provided in order to understand the treatment program compliance and completion rates.

General Counselor Characteristics. Table 4 describes the basic information about the group of counselors working with these drug-involved

³Does not include participants placed in residential treatment.

TABLE 2*Characteristics of Offenders Participating in Drug Courts by Site*

	Site 1	Site 2	Site 3	Site 4	Total
Prior Criminal History					
<i>Number of Prior Arrests</i>					
None	10.9	34.9	8.6	22.1	17.9
One	23.2	20.8	14.7	28.5	23.1
Two or More	65.9	44.3	76.7	49.4	59
<i>Mean Number of Prior Arrests</i>	3.6	1.9	6.7	2.2	3.7
<i>Types of Prior Arrests</i>					
Personal	13.0	7.6	12.7	9.3	10.8
Property	29.5	19.2	23.1	27.1	25.5
Motor Vehicle/DWI	5.2	28.7	3.2	2.4	4.7
Drug	38.8	37.7	50.7	54.7	50.6
Other	13.6	6.8	10.3	6.5	8.5
<i>Drug Court Arrest</i>					
Personal	6.4	2.1	8.9	2.3	4.7
Property	22.3	7.3	9.3	9.7	10.6
Motor Vehicle	0.5	1.6	2.4	0.1	0.9
Drug	63.2	53.1	67.4	85.8	75.4
DUI/DWI	4.1	34.4	7.5	0.8	5.9
Other	3.6	1.6	4.7	1.2	2.5
<i>Drug Court Arrest</i>					
% Felony	65.2	63.5	-	96.8	59.7
Substance Abuse					
<i>Ever Used (Lifetime)</i>					
Alcohol	95.9	89.1	68.7	88.8	80.8
Marijuana	93.2	100	59.5	85.1	76.5
Crack/Cocaine	81.8	29.2	30.2	53.6	44.1
Amphetamines	5.0	58.9	67.5	19.7	43.7
Opiates	22.3	7.3	18.5	1.4	12.6
Other	38.2	24	10.4	14.1	16.9
<i>Use Last 30 Days</i>					
Alcohol	44.1	21.4	55.0	64.0	52.2
Marijuana	40.5	92.7	45.4	61.9	55.3
Crack/Cocaine	35.0	27.6	20.7	29.0	26.0

Amphetamines	0.0	13.5	51.3	6.2	26.4
Opiates	13.2	0.5	11.5	0.4	7.1
Other	6.4	6.8	9.0	2.7	6.5
<i>% Prior Treatment Experience</i>	48.2	27.1	17.8	37.5	28.2

Demographics

% Male	80	79	46	72	65
% Caucasian	54	79	69	32	49
Mean Age	29	33	33	29	31
% High School Graduate/GED	37	63	25	52	40
% Employed at Admission	33	63	28	43	37

offenders. Counselors at these programs appear to have an average of four years of experience providing substance abuse treatment. The extent to which they had obtained advanced academic degrees varied by site, but it was generally low. Counselors generally work 30 to 40 hours per week, conducting between 3 and 6 group meetings (lasting from 6 to 8 hours total) per week. Overall, across all sites counselors reported that 41 percent of their time was spent in clinical tasks such as group or individual counseling with the remainder of their work time devoted to various administrative tasks (e.g., intakes, assessments, etc.). Group size was generally consistent across sites at about 10 to 13 clients per group, with caseloads ranging from 25 to nearly 77 offenders per counselor.

Counselors' Philosophies of Effective Treatment. Table 5 presents the important components of effective drug treatment as rated by the counselors working with drug court clients. Counselors rated their agreement with each of these statements using a five-point Likert scale ("1" = "strongly agreed with the statement," "5" = "strongly disagreed with the statement"). (Refer to Taxman, Simpson, and Piquero (2002) for a discussion about the instrument.) Overall, the findings show that counselors find most components to be relevant and agree that they need to part of a drug court program. This pattern of results suggests that the sample of drug court-involved counselors appear to rely upon a wide range of approaches to treatment, apparently being willing to apply almost any technique. It may also suggest that counselors do not generally have a strong affiliation or understanding of any particular approach to treatment, or that they do not implement a coherent treatment strategy in their programs.

Observation of Treatment Services. Table 6 presents information representing the proportion

of all observed meetings in which any item from each category of treatment intervention occurred. For example, in site 1 (with five separate treatment programs observed) on average, only about 22 percent of the observed meetings contained any discussion of cognitive-behavioral components. Despite the vast literature demonstrating the effectiveness of cognitive-behavioral treatment components for dealing with substance abusers, no site had more than 22 percent of the observed meetings include these treatment components. Items in the education/aftercare category (mostly informational components, such as teaching clients the basic concepts and vocabulary associated with treatment or the impacts of various drug classes) were also relatively rarely employed in these programs. Similarly, items drawn from the Alcoholics Anonymous (i.e., Disease Model) and Therapeutic Community Models (e.g., confrontation, the reliance on peers as the agent of change) were also relatively rarely employed (in less than 20 percent of meetings).

Finally, treatment components aimed at creating a safe (physically and psychologically) environment for clients, as well as those fostering self-exploration, were somewhat more commonly employed, particularly in the programs operating in two sites where these items occurred in only about 25 percent of observed meetings. The observations revealed that the counselors in this sample of drug courts were employing a relatively wide range of treatment activities in group sessions. On the other hand, the cost of this diversity in treatment components appears to be that most topic areas are dealt with sparingly. Stated simply, treatment sessions tend to present a wide range of information in a largely superficial and brief manner.

Results presented in Table 7 are consistent with the survey findings that counselors use a variety of treatment components in a generally superficial approach to treatment. The coun-

sults are dealing with a wide range of treatment issues in a "broad-based" manner, which is evident in the amount of time in a given meeting that is spent on any particular topic. For instance, in site 3, the average amount of meeting time spent on cognitive-behavioral components was 11 percent. Thus if the average group session was one and a half (1.5) hours, clients in these meetings would have spent approximately 10 minutes discussing cognitive-behavioral treatment components. Site 2 spent the most time addressing cognitive-behavioral components (26 percent of the meeting time in meetings where CBT occurred). The treatment topic area that received the most intense discussion (when it was presented) was the education/aftercare area.

Discussion and Implications of the Findings

This study was designed to examine how treatment services were provided to offenders who participated in a drug court in one of four settings. The retrospective analysis found that drug court program completion rates are low, ranging from 29 to 48 percent. This is on par with or slightly better than the typical outpatient drug treatment program, as determined by a nationwide study of outcomes from drug treatment programs (Simpson, et al., 1997), although drug court treatment services are provided for nearly four times the length of the traditional outpatient programming. It is apparent that program compliance varies considerably but few offenders are in total compliance. In each of these four drug courts, 53 percent of the graduates and 23 percent of the terminators were in drug court for more than the expected 12-month program—some for up to twice as long—presumably due to compliance problems. [The data available for this study only allow us to postulate this as a possible explanation.] The program failures are more likely to be

TABLE 3*Compliance with Drug Court Program Components and Time Spent in Drug Court by Graduation Status*

	Site 1	Site 2	Site 3	Site 4	Site 5
% Graduate	31.8%	48.4%	36.2%	29.0%	33.1%
Expected Length	15 months	12 months	12 months	12 months	12 months
	G/T	G/T	G/T	G/T	G/T
Sample Size	70/150	93/99	262/461	354/878	779/1578
Program Length					
<i>Maximum Months in Drug Court</i>	42/44	33/36	33/42	45/43	45/44
Mean Months in Drug Court	20.9/9.8	12.6/8.8	14.6/8.1	16.4/11.0	15.7/9.9
% In Drug Court for More than 12 Months	65.7/14.7	50.5/22.2	51.7/15.2	54.0/28.6	53.8/23.1
Drug Testing					
% Positive	57.1/81.9	52.6/89.8	53.8/60.5	63.9/88.5	63.9/81.4
% Meet 75% of Required Tests	100/64.3	55.1/18.3	35.2/22.1	69.8/31.9	62.9/23.3
Drug Treatment					
% Meet 75% of Required Treatment Sessions	97.1/53.1	92.0/31.2	31.0/13.7	68.3/9.8	61.9/20.7
Rearrest Rates					
Within Program	9/15*	11/19*	21/73*	12/23*	14/42*
12 Months Post Drug Court	6/21*	11/39*	13/53*	7/38*	9/41*
Means Months to Rearrest	4.5/4.5	7.6/4.6	6.9/4.2	6.3/4.7	6.6/4.5

G=Successful Graduates; T=Unsuccessful

*P<.05

rearrested both within drug court program and post drug court program than program graduates.

A review of the qualitative data offers some insight into some of the program compliance, completion rates, and rearrest rates. The treatment providers for the drug court program, whether they are contractors or part of the public health system, and whether they operate both within the drug court setting or in their own clinics, appear to be providing treatment programming noted by the researchers in DATOS—a little bit of everything (Etheridge, et al., 1997; Simpson et al., 1997). The survey data reveal that treatment counselors do not have a phi-

losophy of treatment and believe that a wide range of interventions is needed in treating the addict-offender population. Observations confirmed the survey data—counselors covered a wide range of material but spent little time and activities on skill development among the addict-offenders. The treatment services, although long in duration, did not have specific recovery goals. That is, the tendency is to use counselor-driven sessions that do not reflect a specific recovery philosophy, do not emphasize cognitive development, or do not focus on behavioral skill development. In essence, the practice does not appear to

reinforce the Drug Court goals in that the treatment does not necessarily focus on the drug using habits of drug-involved offenders. In this manner, the drug treatment court programming—testing, treatment, sanctions, and status hearings—may not achieve one of the key goals of the drug court.

Given the qualitative data of observations and survey data of treatment counselors, it seems plausible that some of the compliance problems observed in the retrospective analysis may be due to the quality of services provided, the offender's perception that the services are not beneficial, or the offender's low level of satisfaction with the services provided.

TABLE 4
General Counselor Characteristics

	Site 1	Site 2	Site 3	Site 4	Total
Counselor Characteristic					
<i>Respondents</i>	3	3	21	8	38
(% Of solicited)	(50%)	(30%)	(65.6%)	(53.3%)	(54.4%)
% In Recovery	0	66.6%	38%	50%	40%
Modal Highest Degree Held	B.A.	Ph.D.	<H.S.	B.A.	<H.S.
(% w/modal degree)	(100%)	M.A., <H.S.	(48%)	(50%)	(40%)
Mean Years Providing Drug Treatment	4.0	2.5	4.7	6.1	4.8
Mean Age in Years	28.7	51.0	42.2	36.5	40.5
% White Counselors	33.3%	66.6%	19%	38%	28.6%
% African American Counselors	66.6%	33.3%	24%	25%	28.6%
Mean Hours Worked Week	40.0	27.2	40.3	30.0	36.8
Mean Number of Clients Assigned to Counselor	76.7	28.7	34.3	25.0	35.3
Mean Weekly Number of Groups (Hours/Week)	3.0	5.7	4.7	4.3	4.5
	(6.2 hours)	(8.0 hours)	(8.2 hours)	(6.8 hours)	(7.6 hours)

† - Data is from counselors who responded from all five of the programs examined at this site.

‡ - Data is from counselors who responded from both of the treatment programs at this site.

The observations and surveys confirm that there is a need for more attention to the nature of clinical services delivered to the offender population.

Conclusion and Steps for Integration

Failures on community supervision account for nearly 40 percent of the new intake to prison. Many of these failures are due to offenders not meeting the treatment conditions of release. This case study illustrated that supervision systems, and specialized programs like drug courts, need to attend to the issues of the treatment services offered to offenders participating in outpatient community-based programs. The findings from this study should persuade justice professionals to focus on the concept of integrated management of service delivery, not merely coordination. The importance of cognitive-behavioral services focused on skill development and recovery processes of offenders (Sherman, et al, 1997; Taxman, 1999). Yet, in these drug courts the treatment did not necessarily deliver the services.

The movement towards integration of services will require consideration of the following:

1. Justice and treatment teams should use quality assurance methods of treatment, testing, status hearings, sanctions and rewards to ensure that the supervision and treatment services are being delivered as planned. Quality assurance techniques should establish measurable standards for all components of the programming.
2. Treatment programming would benefit from a curriculum-driven clinical programming where there are measurable objectives. The curriculum provides a mechanism to ensure that counselors and clinical staff subscribe to a recovery process, and that the recovery process is being presented and developed in components that the offenders can comprehend.
3. Treatment programming may be focused on achieving clinical goals in each stage before proceeding to the next level.
4. Treatment programming may be assessed based on the severity of drug use and criminal behavior of drug court offenders. The programming may attend to substance abuse and criminal value systems to ensure offender long-term change.
5. Staff development of treatment and justice staff (e.g. judge, prosecutor, defender, supervision agent, etc.) may ensure that staff adopt a philosophy of recovery, a treatment curriculum, and directive skills that the addict-offender should develop during the drug court. Cross-training is critical to ensure that all treatment and justice programming reinforces the goals.
6. Treatment counselors and clinicians and the management of the program need to establish an operating philosophy that guides the care given to offenders.
7. Justice officials may compliment the treatment programming by using contingency management or graduated sanction/reward protocols. Research continues to find that structured, well-articulated behavioral expectations with set consequences are more likely to produce behavioral outcomes than responses that tend to be erratic.

TABLE 5

Mean Scores for Counselors' Philosophy of Effective Components
(1=Strongly Agree, 5=Strongly Disagree)

	Site 1	Site 2	Site 3	Site 4	Total
Effective Component Scales					
Conflict	1.4	1.8	1.8	2.2	1.9
Labeling	1.3	1.3	1.5	1.6	1.5
Social Control	1.0	1.6	1.6	1.4	1.5
Social Disorganization	1.8	1.8	1.9	1.9	1.9
Social Learning	1.8	1.7	1.5	1.3	1.5
Strain	1.6	1.5	1.5	1.2	1.4
Anti-social Values	1.8	1.8	1.6	1.4	1.6
Cognitive Skills Deficits	1.6	1.7	1.6	1.3	1.5
Disease Model	1.8	2.8	1.7	1.8	1.8
Psychopathic Character	1.8	2.8	1.9	2.3	2.1

† - Mean response for each scale is presented for responding counselors from all five of the programs at this site.

‡ - Mean response for each scale is presented for responding counselors from both treatment programs at this site.

TABLE 6

Observation of Treatment Meetings
(Percent of Meetings Observed Containing at Least One Item from the Category)

	Site 1	Site 2	Site 3	Site 4	Total
% Meetings					
Cognitive-Behavioral Items	19.5	16.8	22.4	15.3	18.5
Education and Aftercare Items	7.2	5.5	10.2	5.1	7.0
Safety and Self-Exploration Items	21.8	14.8	26.1	12.2	18.8
12-Steps (AA/NA) or Therapeutic Community (TC)	14.3	6.9	13.2	19.7	13.5

† - Data is presented from the average of five treatment programs at this site.

‡ - Data is presented from the average of two treatment programs at this site.

References

- Backer, T. E., David, S. L., & Soucy, G. (1995). Reviewing the behavioral science knowledge base on technology transfer. Introduction. *NIDA Research Monograph (155)*, pp. 1-20.
- Banks, D., & Gottfredson, D. (2003) The effects of drug treatment and supervision on time to rearrest among drug treatment court participants. *Journal of Drug Issues*, forthcoming.
- Belenko, S. (1999). Research on drug courts: A critical review. 1999 Update. National Drug Court Institute Review, II (2): 1-58.
- Belenko, S. (2001) Research on drug courts: A critical review. 2001 Update. New York: The National Center on Addiction and Substance Abuse at Columbia University.
- Bonczar, T. P. (1997). *Characteristics of adults on probation*, 1995. Washington, DC: Bureau of Justice Statistics.
- Bureau of Justice Statistics (2000). *Correctional populations in the United States, 1997*. Washington, DC: U.S. Department of Justice.
- Bureau of Justice Statistics (1998). *Probation and parole populations, 1997*. Washington, DC: U.S. Department of Justice.
- Chao, M., Sullivan, K., Harwood, R., Schildhaus, S, Zhand, Z, & Imhof, L. (2000). *Survey of substance abuse treatment providers as information customers*. Washington, DC: U.S. Department of Health and Human Services Substance Abuse

TABLE 7*Observation of Treatment Time**(Percent of Treatment Time Spent on Items in the Category)^a*

	Site 1	Site 2	Site 3	Site 4	Total
% of Time					
Cognitive-Behavioral Items	8.2	26.5	11.1	16.6	15.6
Education and Aftercare Items	30.5	42.7	27.0	27.3	31.9
Safety and Self-Exploration Items	13.7	8.6	15.2	14.5	13.0
12-Steps (AA/NA) or Therapeutic Community (TC)	6.0	7.2	3.5	12.4	7.3

^a - Time spent on topics rated as "other" is not included in this table, nor is time spent on breaks taken during the groups' scheduled meeting times.

†- Data is presented from the average of five treatment programs at this site.

‡- Data is presented from the average of two treatment programs at this site.

- and Mental Health Services Administration: Center for Substance Abuse Treatment.
- Cooper, C. (2001). 2000 drug court survey report: Program operations, services & participant perspectives. Washington D.C.: American University Technical Assistance Unit.
- Craddock, S. G., Rounds-Bryant, J. L., Flynn, P. M., & Hubbard, R. L. (1997). Characteristics and pre-treatment behaviors of clients entering drug abuse treatment: 1969 to 1993. *American Journal of Drug and Alcohol Abuse* 23 (1), 43-59.
- Farabee, D., Prendergast, M. L., & Anglin, M. D. (1998). The effectiveness of coerced treatment for drug-abusing offenders. *Federal Probation*, 62, 3-10.
- Farabee, D., Prendergast, M. L., Cartier, J., Wexler, W., Knight, K., & Anglin, M. D. (1999). Barriers to implementing effective correctional treatment programs. *The Prison Journal*, 79, 150-162.
- Farabee, D., Shen, H., Hser, Y., Grella, C. E., & Anglin, M. D. (2001). The effect of drug treatment on criminal behavior among adolescents in DATOS-A. *Journal of Adolescent Research*, 16 (6), 679-696.
- Etheridge, R.M., Hubbard, R.L., Anderson, J., Craddock, S.G., & Flynn, P. 1997. Treatment structure and program services in the drug abuse treatment outcome study (DATOS), *Psychology of Addictive Behavior*, 11(4): 244-260.
- Goldkamp, J.S., White, M.D., & Robinson, J.B. (2001). Do drug courts work? Getting inside the drug court black box. *Journal of Drug Issues*, 31:27-72.
- Gottfredson, D., Najaka, S., & Kearley, B. (2002). Effectiveness of drug treatment courts: Evidence from a randomized trial. *Criminology and Public Policy*, forthcoming.
- Harrell, A., Cavanagh, S., & Roman, J. (1998) Findings from the evaluation of the D.C. superior court drug intervention program: final report. Washington D.C.: The Urban Institute.
- Hiller, M. L., Knight, K., Broome, K. M., & Simpson, D. D. (1998). Legal pressure and treatment retention in a national sample of long-term residential programs. *Criminal Justice and Behavior*, 25 (4), 463-481.
- Knight, K., Hiller, M. L., Broome, K. M., & Simpson, D. D. (2000). Legal pressure, treatment readiness, and engagement in long-term residential programs. *Journal of Offender Rehabilitation*, 31, 101-115.
- Lamb, S., Greenlick, M., & McCarty, D. (1998) *Bridging the gap between practice and research: Forging partnerships with community based drug and alcohol treatment*. Washington, D.C.: National Academy Press.
- Mumola, C. J. (1999). *Substance abuse and treatment, state and federal prisoners, 1997*. Washington, DC: Bureau of Justice Statistics.
- National Institute on Drug Abuse. (1999). *Principles of drug addiction treatment: A research based guide*. Rockville, MD: National Institutes of Health, NIH Publication No. 99-4180.
- National Association of Drug Court Professionals (1997) *Defining drug court: The key components*. Washington, D.C.: Drug Court Program Office, Office of Justice Programs.
- Peters, R. H. & Murrin, M.R. (1998) Evaluation of treatment-based drug courts in Florida's first judicial circuit. Tampa, FL: Department of Mental Health, Law and Policy. Louis de la Parte Florida Mental Health Institute, University of Southern Florida.
- Simpson, D. D., Joe, G. W., Fletcher, B. W., Hubbard, R. L., & Anglin, M. D. (1997) A national evaluation of treatment outcomes for cocaine dependence. *Archives of General Psychiatry*, 56, 507-514.
- Sherman, L. W., Gottfredson, D., MacKenzie, D. L., Eck, J., Reuter, P., & Bushway, S. (1997). *Preventing Crime: What Works, What Doesn't, What's Promising*. Washington DC: Office of Justice Programs.
- Simpson, D. D., & Joe, G.W. (1993). Motivation as a predictor of early dropout from drug abuse treatment. *Psychotherapy*, 30 (2), 357-368.
- Simpson, D. D., Joe, G. W., Broome, K. M., Hiller, M. L., Knight, K., & Rowan-Szal, G. A. (1997). Program diversity and treatment retention rates in the drug abuse treatment outcome study (DATOS). *Psychology of Addictive Behaviors* 11 (4), 279-293.
- Taxman, F.S (2002). Examining the effectiveness of supervision: new approaches to supervision, *Federal Probation*.

- Taxman, F. S. (1999). Unraveling what works for offenders in substance abuse treatment services. *National Drug Court Institute Review*, II (2): 94-133.
- Taxman, F. S., & Bouffard, J. A. (2000). The importance of systems issues in improving offender outcomes: Critical elements of treatment integrity. *Justice Research and Policy*, 2 (2), 9-30.
- Taxman, F. S., & Messina, N. (2001). Civil commitment and mandatory treatment. In C. G. Leukefeld, F. Tims, & D. Farabee *Treatment of Drug Offenders: Policies and Issues*, pp. 301-318. New York: Springer.
- Taxman, F.S. & J. Bouffard (2002). Treatment Inside the Drug Court: The who, what, where, and how of treatment services, *Journal of Substance Use and Misuse*, Vol 37 (12/13):1665-1688.
- Taxman, F.S., S. Simpson, & N. Piquero (2002). Measuring and calibrating therapeutic integration in drug treatment programs. *Journal of Criminal Justice*. Vol 30: 159-173.
- Turner, S., Longshore, D., Wenzel, S., Deschenes, E., Greenwood, P., Fain, T., Harrell, A., Morral, A., Taxman, F.S., Iguchi, M., Greene, J., & McBride, D. (2002). A decade of drug treatment research. *Substance Use & Misuse*. Vol 37 (12/13):1489-1527.
- Tyler, T. R. (1990) *Why people obey the law*. New Haven: CT: Yale University Press.

The Design of Social Support Networks for Offenders in Outpatient Drug Treatment

Mark D. Litt,

University of Connecticut Health Center

Sharon D. Mallon,

University of Connecticut

IT HAS OFTEN BEEN noted that the most significant challenge in treating drug dependence is not the attainment of initial abstinence, but avoiding relapse after treatment has started. Marlatt (1985) estimated that fully one-third of individuals treated for alcoholism relapse in the first 90 days after completion of treatment. In a review of treatment effectiveness, Nathan (1986) noted that one to two years after treatment, fewer than half of patients maintain sobriety. Figures for relapse from drug treatment are comparable, especially among criminal offender populations (Hoffman & Miller, 1993). Despite increased attention to the problem of relapse in the last decade, few interventions have been able to effectively counter the relapse phenomenon.

In order to address the relapse issue, treatment programs have long sought to bolster clients' social support networks (Strauss & Falkin, 2001). There is empirical support for this approach with released offenders. Broome et al. (1997), for instance, examined predictors of drug-related problems and rearrest in probationers. Results indicated that social network, in the form of drug-using peers, was a direct contributor to both recidivism and problems related to drug use.

In practice, efforts to increase social support are informal or non-systematic, are not the main focus of the intervention, and occur in the context of overall case management (e.g., Buckley & Bigelow, 1992). Additionally, the rationale for social and family support is usually not discussed: the provision of social support, particularly family support, is usually taken for granted as beneficial. This article will review the existing literature on the design and implementation of

social support networks as treatments or adjuncts to treatment for drug-dependent individuals, especially those who have been involved in the criminal justice system. The authors will argue that social support networks are more than just sources of emotional support; they can apply behavioral contingencies that can change the client's drug using and prosocial behavior after conventional treatment is finished.

Social Support—A Behavioral Analysis

A behavioral formulation of the treatment and relapse processes suggests that individuals derive reinforcement for abstinence behavior during treatment, but that after leaving the treatment milieu, they once again encounter stimuli for drug use, and drug use is reinforced (e.g., Bigelow, Brooner & Silverman, 1998). Data indicate that alcohol and drug abusers derive less reinforcement from non-drug activities in their home environments than do non-drug users. Surveys of activities in these groups show that drug users spend much less time than do non-drug users engaged in non-drug-involved leisure or social activities. Van Etten et al. (1998), for example, compared cocaine users with age-, sex-, and SES-matched controls. Cocaine users reported significantly lower frequency of engagement in positive-mood-related activities than did the controls. Carroll (1996) therefore concluded that the availability of non-drug reinforcement could reduce the acquisition and use of illicit drugs.

The same appears to be true of alcohol abusers. In their examination of the Behavioral Choice Model of substance misuse, Vuchinich and Tucker (Tucker et al., 1985; Vuchinich & Tucker, 1988) reviewed the literature on alcohol consumption and the availability of alternative reinforcers in alcohol dependent and abusing individuals. They concluded that drinking is increased when access to reinforcers alternative to alcohol is constrained. Conversely, when access to alcohol is constrained, consumption is decreased.

The treatment setting, especially in prison-based treatment, effectively constrains access to drugs, thus reducing consumption and (theoretically) making engagement in treatment-relevant activities more likely. In addition, some of the treatment activities will be inherently reinforcing, increasing the likelihood that clients will engage in non-drug activities. When people leave treatment, however, access to drugs is typically less constrained, and they often experience few reinforcers for sobriety to compete with reinforcement from drug taking.

One potent source of reinforcement for drug use is the client's social network. It has often been noted that the social milieu of a drug abuser serves to support the drug use of those in the network (e.g., Schroeder, et al., 2001; Steinglass & Wolin, 1974). General social support per se, however, has at best proven to be only a modest predictor of long-term substance abuse treatment outcomes (e.g., Dobkin et al., 2002; Goehl, Nunes, Quitkin & Hilton, 1993; Moos, Finney, & Cronkite, 1990; Wasserman, Stewart & Delucchi, 2001). It would appear that the target of support is critical. Longabaugh and Beattie (1985, 1986),

among others, differentiated drinking-specific support from general support, and coined the term "network support for drinking." This network support construct, designating the amount of support (reinforcement) an individual receives for drinking or drug use, has been found to be predictive of poor outcomes in treatment-seeking patients (Beattie, Longabaugh, & Fava, 1992; Havassy, Hall & Wasserman, 1991; Havassy, Wasserman & Hall, 1995; Longabaugh et al., 1993).

To date the construct of network support has mostly been used to describe a network supportive of drug use. Goehl (1993), for instance, noted in a study of 70 methadone patients that having at least one drug user among those closest to the patient was highly predictive of positive urine screenings. Sung, Tabachnick, and Feng (2000) tested several theories for continued drug use in 366 convicted heroin users. The hypothesis receiving the strongest empirical support was the social network hypothesis, which asserts that different subgroups of drug users develop their own subcultures that support drug use. Similar results were found by Schroeder et al. (2001). Drug use by members of the social networks of 236 heroin and cocaine users was the strongest predictor of continued drug use by the participants. Among women drug offenders, the most significant member of the social network is the partner. Use of drugs by the partner has been among the strongest predictors of drug use by women offenders (e.g., Falkin & Strauss, 2003; Pivnick et al., 1994; O'Dell, Turner & Weaver, 1998).

It follows that if a social network that reinforces drug use leads to more drug use, then networks that reinforce being clean and sober should yield greater drug abstinence. There is indirect evidence for this proposition. Gordon and Zrull (1991), for instance, collected social network data on 156 alcoholic patients and recontacted them one year after their discharge from inpatient treatment. The authors concluded that the active support (including participation in treatment) of non-drinking friends and coworkers was the most influential factor in recovery. Most predictive of poor outcomes was encouragement of drinking by coworkers, some of whom were co-drinkers. In a study of predictors of relapse in treatment for cocaine, McMahon (2001) reported that quality of the social support network improved in those who maintained abstinence, whereas relapsers failed to report this improvement in quality.

Constructing Social Networks for Treatment

12-Step Fellowships: Alcoholics Anonymous, Narcotics Anonymous

Perhaps the clearest example of a constructed social network that supports sobriety is Alcoholics Anonymous (AA), along with its various 12-step cousins Narcotics Anonymous (NA), Cocaine Anonymous (CA), and so forth. These fellowship programs, whether they are spiritually based or secular, provide ready-made sobriety-supporting networks, and fulfill several of the conditions required of a behavioral choice model of relapse prevention (Tucker, et al., 1990). The programs provide alternative activities to drinking or drug use, they constrain access to drugs (at least for the time when the person is attending a meeting), and they reinforce sober behavior.

Several studies have provided support for the efficacy of AA or similar groups in reducing drug use. Emrick (1987) found that AA members achieve abstinence at a higher rate than do professionally treated alcoholics, and that AA participants who are more active in the fellowship program do as well as or better than less active participants. In another study, it was found that those who attended a social club for recovering alcoholics drank less and improved more in general life functioning (Mallams, Godley, Hall & Meyers, 1982). Data are sparse regarding effectiveness of fellowship programs for released criminal offenders. The findings of a meta-analysis of data from the Correctional Drug Abuse Treatment Effectiveness project conducted by Pearson and Lipton (1999) suggested, however, that promising aftercare treatments included 12-step programs, as well as cognitive-behavioral programs and methadone maintenance. The findings of these studies are consistent with the notion that social support for sobriety can enhance treatment outcome, but none of them looked specifically at the level of support for drinking in their clients' social networks.

Project MATCH (Project MATCH Research Group, 1977) provided some of the most detailed information on social networks in alcoholics to date. With over 1700 clients, this multisite study of matching patients to treatment collected a variety of social network measures. Analyses of the Project MATCH data set indicate that clients whose social networks were supportive of drinking had worse outcomes than those whose social network did not support drinking (Longabaugh et al., 1998). A high level of network support for drinking was also related to a decreased likelihood of involvement in AA.

Additionally, results from Project MATCH indicated that among those with high network

support for drinking, clients who had been assigned to the Twelve Step Facilitation treatment (TSF; Nowinski, Baker, & Carroll, 1992), in which attendance at AA was emphasized, had better outcomes than clients assigned to Motivational Enhancement Therapy (MET). One mechanism for this effect was that treatment with TSF resulted in greater involvement in AA, even among those with high network support for drinking. Thus, AA involvement by clients with high network support for drinking appeared to be at least a partial mediator of the observed matching effect. Clients with both high network support for drinking and high AA involvement had more abstinence than those with network support for drinking who were not involved in AA. In contrast, for clients whose social network did not support continued drinking, AA involvement had much less impact on outcome.

Kaskutas, Bond, and Humphreys (2002) also explored changes in outcomes and social networks as a function of AA attendance. These investigators followed 654 alcoholic men and women for up to one year after their presentation to treatment. Abstinence at follow-up was significantly predicted by involvement in AA, fewer pro-drinking influences in one's social network, and greater support for abstinence from people encountered in AA.

A similar study by Humphreys and colleagues (Humphreys, Mankowski, Mood & Finney, 1999; Humphreys & Noke, 1997) employed 2,337 treated drug-dependent men, many of whom were criminal offenders. Involvement in mutual help fellowships (e.g., NA) predicted reduced substance use at one-year follow-up. This relationship was mediated by enhanced friendship networks, characterized by the proportion of friends who abstain from substance use and by increase in active coping responses.

The implication of these findings is that fellowship programs like AA or NA are effective in helping decrease substance use, and that their effectiveness is in part due to the delivery of social networks that discourage drug use and promote prosocial change. A treatment that encourages a change of social network from one that is supportive of drinking or drug use to one that is supportive of sobriety will be effective. And it will be more effective for those whose pretreatment environments are initially more supportive of drug use.

Community Reinforcement Approaches

One approach that directly seeks to construct supportive environmental and social networks is referred to as the Community Reinforcement Approach (CRA). CRA began as a package of

treatment components intended to provide the patient with support for abstinence from substance use in all aspects of his life (Hunt & Azrin, 1973), including the vocational, recreational, and family environments, as well as the social network. Components of the original program included job finding, marital therapy, leisure counseling, reinforcer access counseling, a social club, and home visits. Over time Azrin and his colleagues added other components, including a buddy system, motivational counseling and drink refusal instruction (Azrin, 1976; Azrin et al., 1982). The central behavioral rationale for CRA is to reinforce the drug user's sobriety and encourage the development of activities incompatible with drug use, such as participation in recreational and social activities and employment. Possibly because of its all-encompassing nature, CRA has garnered large treatment effects in clinical trials conducted by the Azrin group, and is considered to be among those substance abuse treatment modalities that have the best empirical evidence for effectiveness (Miller et al., 1995; Miller & Wilbourne, 2002).

The most recent large-scale study of CRA in alcoholics was reported by Miller et al. (2001). In this study four basic treatments were compared: "Traditional treatment," an eclectic, alcohol counseling-based approach; traditional treatment plus disulfiram; CRA plus disulfiram; and CRA without disulfiram. The CRA treatment included functional analysis of antecedents and consequences of drinking, problem-solving training, social skills training, social counseling, vocational counseling, behavioral marital therapy for those with spouses or partners, relaxation training, and drink refusal rehearsal. Overall, results indicated that the CRA groups reported lower drinking levels than did the traditional treatment groups in the first six months of follow-up, but that the traditional groups achieved more continuous abstinence. Both types of treatments yielded similar good results in months 16 to 24 of the follow-up period. Interestingly, the authors attribute the advantage of the traditional treatments in achieving abstinence to its reliance on referral of clients to AA.

Treatment of drug abuse with CRA has produced some success. Higgins, et al. (1995) reported on the effectiveness at one year of two trials in which community reinforcement approaches were compared to traditional drug counseling (Higgins et al., 1993; Higgins, Budney, Bickel, Foerg, et al., 1994). The CRA treatments contained five basic elements: 1) minimizing contacts with antecedents to drug use; 2) development of new recreational activities to take the place of drug use; 3) vocational counseling; 4) relationship counseling for those with spouses or partners;

and 5) disulfiram treatment for those with concurrent alcohol problems. All treatment groups improved through treatment and into the follow-up in terms of cocaine use and indicators on the Addiction Severity Index (ASI; McLellan, et al., 1985). Some efficacy differences did emerge, and these supported CRA conditions, particularly during treatment, when CRA was combined with vouchers that were dispensed contingent upon production of clean urines.

Bickel et al. (1997) compared a CRA-plus-vouchers approach to traditional drug counseling with opiate-dependent subjects in buprenorphine detoxification. Subjects in this study earned vouchers contingent upon both production of clean urines and completion of CRA-related activities. Subjects in the CRA-plus-vouchers condition were more likely to complete the detoxification protocol, and produced more weeks of continuous abstinence than did subjects in the drug counseling condition. It is not clear from this study to what degree completion of CRA activities specifically accounted for the results, as opposed to reinforcement for clean urines.

Abbott et al. (1998) studied 181 opiate-dependent patients on methadone maintenance. Patients were randomized to 20 weeks of drug counseling, CRA, or CRA with relapse prevention. The combined CRA groups did significantly better than the standard group in terms of producing consecutive opiate-negative urinalysis at three weeks, and greater improvements in ASI drug composite scores at six months. These results support the benefit of CRA strategies with opiate-dependent subjects on methadone maintenance, even without voucher incentives.

Higgins and Abbott (2001) concluded that CRA has made contributions to the treatment of drug users apart from that of vouchers. Still, they note that most of the success of CRA with cocaine and opiate abusers has come from conditions that combined CRA with voucher incentives, and they suggest that voucher incentives be considered as an additional component to CRA treatment of drug users.

No formal studies of CRA with criminal offenders have been published, although elements of CRA (e.g., vocational counseling, relationship counseling) have been added to traditional outpatient counseling programs for parolees, and the outcomes of these additions will be discussed later. Indeed, relatively few clinical trials of any sort have employed CRA outside of those reported by Azrin and his colleagues, and by Higgins and his colleagues in Vermont. This is possibly due to the relatively complicated logistics and high costs of implementing multiple behavioral components (Kadden, 2001).

Given the many components that comprise

CRA interventions, it is not clear what elements are responsible for any treatment gains seen. Although CRA is intended to change the drug user's environment, especially the social network, no investigators of CRA have yet provided evidence that these changes occur. This is particularly a concern for the cocaine and opiate samples, in which vouchers were used. The trend indicated that CRA yielded no better results than traditional drug counseling for these samples, unless voucher incentives were added to the protocol. Until specific data regarding environmental change are provided, it will not be possible to know whether CRA is actually accomplishing its purpose.

Network Therapy and Network Support Treatment

Like CRA, Network Therapy and Network Support Treatment are specifically designed to construct new social networks for the substance user. Unlike CRA, these interventions focus more on the social network of friends, family, and associates than on the vocational, recreational, or other aspects of the abuser's environment.

Network Therapy was developed by Galanter (1986; 1993) in response to what he perceived as a gap in medical treatment for substance abuse. The treatment comprises three elements. The first, and most innovative, is engagement of the patient's natural social network in the treatment setting. This entails bringing the spouse, parents, best friends, and so on into the office or treatment unit and having them all participate in discussions of the patient's treatment along with the patient and therapist. The second element is cognitive-behavioral relapse prevention training. This element focuses on identifying triggers for substance use and behavioral techniques for avoiding them. The third element is the orchestration of resources to provide community reinforcement. This treatment differs from CRA in that it is the therapist who provides all of these services to patients, whereas CRA typically employs several people to fulfill the multiple roles.

Possibly the most important aspect of Network Therapy is the inclusion of the patient's entire social network (or at least the most important supportive people in that network) in the therapy sessions. These supportive network members may not be substance abusers themselves. According to Galanter, Keller, and Dermatis (1997), the average number of participating supportive members is 2.3, and if possible, they all meet together with the patient and therapist to establish common goals and strategies to meet those goals. A typical treatment would include two sessions per week for 24 weeks, with one of the sessions per week involving the network, and the

other involving just the therapist and patient.

No controlled outcome studies have been conducted using Network Therapy. In clinical trials without control groups, Galanter has reported that Network Therapy has resulted in significant retention in treatment and decreases in substance use measured by self-report and by biological assays (e.g., Galanter, 1994; Galanter et al., 1997). One published study employed a control group. Keller and Galanter (1999) trained community counselors to implement Network Therapy with cocaine abusing clients. Chart reviews were used to compare 10 clients engaged in Network Therapy with 20 clients who had been treated in the community with traditional counseling. The Network Therapy patients had fewer positive urine toxicology results over the course of 24 weeks of treatment than did the treatment-as-usual controls (88 percent negative v. 66 percent negative), but rates of treatment retention did not differ between the groups.

No systematic research has been conducted on possible mechanisms of action of Network Therapy. A study by Galanter, Dermatis, Keller, and Trujillo (2002), however, does implicate network change, or at least network involvement, in treatment gains. Forty-seven cocaine dependent clients were treated with Network Therapy by psychiatric resident physicians. Through the 24 weeks of treatment, 73 percent of all observed urine samples were negative for cocaine, and 45 percent of the patients had negative urines in the last three weeks of the treatment period. Positive outcomes were most closely associated with the number of network treatment sessions conducted, and not the number of individual sessions. This finding, while rather weak given the lack of controls, implies that good outcomes were not simply a function of therapist attention, but that supportive network members were also applying contingencies on patient behavior.

Network Support Treatment (NST; Litt & Kabela, 2002) is currently the subject of a large clinical trial. NST is similar to both CRA and Network Therapy in that it aims to change the patient's social environment to make it more supportive of abstinence. It differs from the other treatments in that it does not attempt to alter all aspects of the patient's environment directly. Instead, it relies on teaching the patient to make changes in his or her social network of friends, family, and associates, particularly by using AA, and thereby places fewer demands on therapists and resources than do CRA or Network Therapy. The treatment actually draws heavily on the Twelve-Step Facilitation (TSF) treatment of Nowinski et al. (1992), used in Project MATCH.

Treatment consists of 12 one-hour sessions, and is intended to help the client change his or

her social support network so that it is more supportive of abstinence and less supportive of drinking and drug use. Because AA is a ubiquitous source of social support, and one that is tapped by most treatment services already, encouraging attendance at AA is used as an efficient way to quickly engage clients in a supportive network, much like TSF (Nowinski et al., 1992). The program consists of six core sessions, plus six elective sessions that are chosen by the therapist and the patient together. Core topics include a Program Introduction, Acceptance, Surrender, Getting Active, People-Places-Things, and Termination. Additional material includes assertiveness training and particularly conjoint sessions with a spouse or partner.

Recovery tasks take the form of going to AA meetings, exploring ways to change one's network of support (e.g., by joining a club, taking a second job, etc.), or other assignments discussed jointly by the therapist and the participant. These other assignments may include activities that are not necessarily AA-related but that may improve social networks. Such activities include altering social networks in terms of Education (e.g., obtaining information about a course at a community college, whereby the subject may meet new friends), Employment (e.g., searching for and applying for a job in a non-drinking environment); Family (e.g., family outing); Housing; Social/Recreational (e.g., re-establishing contact with non-drinking friends and relatives), etc.

The clinical trial in which Network Support Treatment is currently being tested will evaluate both treatment outcomes and mechanisms of treatment. The mechanism of treatment is expected to be observable change in the patient's social network, including the number of non-substance using persons in the network versus the number of substance using persons.

Although both Network Therapy and NST are conceptually appealing, neither has been used with offender populations. The addition of social network support elements to existing treatments has been used with released offenders, however.

Social Network Elements in Outpatient Treatment for Released Offenders

As with drug users in general, clinicians and researchers have frequently sought to introduce elements of social network change into treatment with substance-using offenders. Most frequently these attempts include couples or marital therapy. Fals-Stewart, Birchler, and O'Farrell (1996), for example, randomized 80 substance abusing patients (85 percent of whom were released offenders) to traditional drug counseling or to counseling plus adjunctive behavioral couples

therapy (BCT). Patients in the counseling + BCT condition reported better relationship outcomes (better dyadic adjustment), fewer days of drug use, fewer hospitalizations, and fewer drug-related arrests through the 12 months of follow-up than did the control patients. These differences disappeared toward the end of the 12 months, however.

Kidorf, Brooner, and King (1997) devised a program to enlist not only spouses or partners, but any drug-free significant other into treatment for opiate dependent subjects, many of whom were referred by the correctional system. Access to methadone maintenance was made dependent on the patient's identifying at least one drug-free significant other, and then on bringing that person to treatment. Although no outcome data were provided, the authors report that virtually all of their methadone-maintained opiate addicts were able to identify and engage at least one drug-free significant other. A similar program was described by McGrath (1986), wherein rebates were offered to DWI offenders who brought family and friends to educational programs. McGrath reported that the family and friends were often positive influences on the offenders.

In a review of the corrections treatment literature, Haddock (1990) concluded that relatively few treatment modalities meet adequate standards of empirical support and practical financial considerations. Treatments or adjuncts that have met these tests include social skills training, stress management, behavioral self-control training, and family therapy.

Conclusion

By conservative estimates, at least half of the jail detainees in the U.S. are drug-addicted or abuse drugs (U.S. Department of Justice, 1992). Successful efforts have been made to incorporate family and community support into in-prison treatment efforts, resulting in significant drops in recidivism and drug use (e.g., Lemieux, 2002). However, aside from attempts to establish spousal or family support, there are few published accounts of efforts to change the social network of released offenders in outpatient treatment. The existing evidence suggests that outpatient interventions that encourage offender-patients to involve family members or significant others are likely to yield less drug use and lower rates of re-arrest. These results provide a powerful rationale for further efforts to change the social networks of released offenders in outpatient treatment, and thereby create environments that will reinforce abstinence and decrease rates of recidivism.

References

- Abbott, P.J., Weller, S.B., Delaney, H.D., & Moore, B.A. (1998). Community reinforcement approach in the treatment of opiate addicts. *American Journal of Drug & Alcohol Abuse*, 24, 17-30.
- Azrin, N. (1976). Improvements in the community reinforcement approach to alcoholism. *Behaviour Research and Therapy*, 14, 339-348.
- Azrin, N., Sisson, R.W., Meyers, R.J. & Godley, M. (1982). Alcoholism treatment by disulfiram and community reinforcement therapy. *Journal of Behavior Therapy and Experimental Psychiatry*, 13, 1-5-112.
- Beattie, M.C., Longabaugh, R. & Fava, J. (1992). Assessment of alcohol-related workplace activities: development and testing of "Your Workplace." *Journal of Studies on Alcohol*, 53, 469-475.
- Broome, K.M., Knight, D.K., Knight, K., Hiller, M.L., & Simpson, D.D. (1997). Peer, family, and motivational influences on drug treatment process and recidivism for probationers. *Journal of Clinical Psychology*, 53, 387-397.
- Brownell, K.D., Marlatt, G.A., Lichtenstein, E., & Wilson, G.T. (1986). Understanding and preventing relapse. *American Psychologist*, 41, 756-782.
- Bigelow, G.E., Brooner, R.K. & Silverman, K. (1986). Competing motivations: drug reinforcement vs. non-drug reinforcement. *Journal of Psychopharmacology*, 12, 8-14.
- Buckley, R. & Bigelow, D.A. (1992). The multi-service network: reaching the unserved multi-problem individual. *Community Mental Health Journal*, 28, 43-50.
- Carroll, M.E. (1996). Reducing drug abuse by enriching the environment with alternative non-drug reinforcers. In L. Green & J. Kagel (Eds.), *Advances in behavioral economics* (Vol 3, pp. 37-68). Norwood, NJ: Ablex.
- Carroll, M.E., Lac, S.T., & Nygaard, S.L. (1989). A concurrently available nondrug reinforcer prevents the acquisition or decreases the maintenance of cocaine-reinforced behavior. *Psychopharmacology*, 97, 23-29.
- Dobkin, P.L., De Civita, M., Paraherakis, A. & Gill, K. (2002). The role of functional social support in treatment retention and outcomes among outpatient adult substance abusers. *Addiction*, 97, 347-356.
- Emrick, C.D. (1987). Alcoholics Anonymous: affiliation processes and effectiveness as treatment. *Alcoholism: Clinical & Experimental Research*, 11, 416-23.
- Epstein, L.H. (1992). Role of Behavior Theory in Behavioral Medicine. *Journal of Consulting & Clinical Psychology*, 60, 493-498.
- Falkin, G. P. & Strauss, S.M. (2003). Social supporters and drug use enablers. A dilemma for women in recovery. *Addictive Behaviors*, 28, 141-155.
- Galanter, M. (1986). Social network therapy for cocaine dependence. *Advances in Alcoholism and Substance Abuse*, 6 (2), 159-175.
- Galanter, M. (1993). *Network therapy for addiction: A new approach*. New York: Basic Books.
- Galanter, M., Keller, D.S., & Dermatis, H. (1997). Network therapy for addiction: assessment of the clinical outcome of training. *American Journal of Drug and Alcohol Abuse*, 23, 355-367.
- Goehl, L., Nunes, E., Quitkin, F., & Hilton, I. (1993). Social networks and methadone treatment outcome. The costs and benefits of social ties. *American Journal of Drug and Alcohol Abuse*, 19, 251-262.
- Haddock, B.D. (1990). Substance abuse counseling in community corrections: A primer. *Journal of Addictions & Offender Counseling*, 11, 2-12.
- Havassy, B.E., Hall, S.M., & Wasserman, D.A. (1991). Social support and relapse: commonalities among alcoholics, opiate users and cigarette smokers. *Addictive Behaviors*, 16, 235-246.
- Havassy, B.E., Wasserman, D.A., & Hall, S.M. (1995). Social relationships and abstinence from cocaine in an American treatment sample. *Addiction*, 90, 699-710.
- Higgins, S.T., Budney, A.J., Bickel, W.K., Foerg, F.E., Donham, R., & Badger, G.J. (1994). Incentives improve outcome in outpatient behavioral treatment of cocaine dependence. *Archives of General Psychiatry*, 51, 568-576.
- Higgins, S.T., Budney, A.J., Bickel, W.K., Badger, G.J., Foerg, F.E., & Ogden, D. (1995). Outpatient behavioral treatment for cocaine dependence: one-year outcome. *Experimental and Clinical Psychopharmacology*, 3, 205-212.
- Higgins, S.T., Budney, A.J., Bickel, W.K., Hughes, J.R., Foerg, F., & Badger, G. (1993). Achieving cocaine abstinence with a behavioral approach. *American Journal of Psychiatry*, 150, 763-769.
- Higgins, S.T. & Abbott, P.J. (2001) CRA and treatment of cocaine and opioid dependence. In R.J. Meyers & W.R. Miller (Eds.), *Addictions: A community reinforcement approach to addiction treatment*. (pp. 123-146). Cambridge England: Cambridge University Press.
- Hoffman, N.G., & Miller, N.S. (1993). Perspectives on effective treatment for alcohol and drug disorders. *Recent Advances in Addictive Disorders*, 16, 127-140.
- Humphreys, K., Mankowski, E.S., Moos, R.H. & Finney, J.W. (1999). Do enhanced friendship networks and active coping mediate the effect of self-help groups on substance abuse? *Annals of Behavioral Medicine*, 21, 54-60.
- Humphreys, K. & Noke, J.M. (1997). The influence of posttreatment mutual help groups participation on the friendship networks of substance abuse patients. *American Journal of Community Psychology*, 25, 1-16.
- Hunt, G.M. & Azrin, N.H. (1973). A community reinforcement approach to alcoholism. *Behaviour Research and Therapy*, 11, 91-104.
- Kadden, R.M. (2001). Behavioral and cognitive-behavioral treatments for alcoholism: research opportunities. *Addictive Behaviors*, 26, 489-507.
- Kaskutas, L.A., Bond, J. & Humphreys, K. (2002). Social networks as mediators of the effects of Alcoholics Anonymous. *Addiction*, 97, 891-900.
- Keller, D. S. & Galanter, M. (1999). Technology transfer of network therapy to community-based addictions counselors. *Journal of Substance Abuse Treatment*, 16, 183-189.

- Kidorf, M., Brooner, R.K., & King, V.L. (1997). Motivating methadone patients to include drug-free significant others in treatment: a behavioral intervention. *Journal of Substance Abuse Treatment, 14*, 23-28.
- Lemieux, C.M. (2002). Social support among offenders with substance abuse problems: Overlooked and underused? *Journal of Addictions and Offender Counseling, 23*, 41-57.
- Litt, M.D. & Kabela, E. (2002). *Network Support Treatment. Therapist's manual*. Unpublished manuscript. Farmington, CT: University of Connecticut Health Center.
- Longabaugh, R. & Beattie, M.C. (1985). Optimizing the cost-effectiveness of treatment for alcohol abusers. In B.S. McCrady, N.E. Noel & T. Nirenberg (eds.), *Future directions in alcohol abuse treatment research* (pp. 104-136). NIAAA Research Monograph, No. 15, DHHS Publication No. Adm. 5-1322. Washington, DC: US Government Printing Office.
- Longabaugh, R. & Beattie, M.C. (1986). Social investment, environmental support and treatment outcomes of alcoholics. *Alcohol Health and Research World, Summer*, 64-66.
- Longabaugh, R., Beattie, M.C., Noel, N.E., Stout, R.L. & Malloy, P. (1993). The effect of social investment on treatment outcome. *Journal of Studies on Alcohol, 54*, 465-478.
- Longabaugh, R., Wirtz, P.W., Zweben, A., & Stout, R.L. (1998). Network support for drinking, Alcoholics Anonymous and long-term matching effects. *Addiction, 93*, 1313-1333.
- Mallams, J.H., Godley, M.D., Hall, G.M. & Meyers, R.J. (1982). A social-systems approach to resocializing alcoholics in the community. *Journal of Studies on Alcohol, 43*, 1115-23.
- McGrath, R.J. (1986). An education program for collaterals of DWI offenders. *Alcoholism Treatment Quarterly, 3*(2), 139-151.
- McLellan, A.T., Luborsky, L., Cacciola, J., Griffith, J., Evans, F., Barr, H.L., & O'Brien, C.P. (1985). New data from the Addiction Severity Index: Reliability and validity in three centers. *The Journal of Nervous and Mental Disease, 173*, 412-423.
- Miller, W.R., Brown, J.M., Simpson, T.L., Handmaker, N.S., Bien, T.H., Luckie, L.F., Montgomery, H.A., Hester, R.K., & Tonigan, J.S. (1995). What works? A methodological analysis of the alcohol treatment outcome literature. In R.K. Hester & W.R. Miller (Eds.), *Handbook of alcoholism treatment approaches: effective alternatives*. (2nd ed.) (pp. 12-44). Boston: Allyn and Bacon.
- Miller, W.R., Meyers, R.J., Tonigan, J.S. & Grant, K.A. (2001). Community reinforcement and traditional approaches: Findings of a controlled trial. In R.J. Meyers & W.R. Miller (Eds.), *Addictions: A community reinforcement approach to addiction treatment*. (pp. 79-103). Cambridge, England: Cambridge University Press.
- Miller, W.R. & Rollnick, S. (2002). *Motivational Interviewing: Preparing People for Change*. New York: Guilford.
- Miller, W.R. & Wilbourne, P.L. (2002). Mesa Grande: a methodological analysis of clinical trials of treatments for alcohol use disorders. *Addiction, 97*, 265-277.
- Moos, R.H., Finney, J.W., & Cronkite, R.C. (1990). Evaluating and improving alcoholism treatment programs. In R.H. Moos, J.W. Finney & R.C. Cronkite (Eds.), *Alcoholism treatment: Context, process and outcome*. (pp. 3-13).
- Nowinski, J., Baker, S., & Carroll, K. (1992). *Twelve Step Facilitation Therapy Manual: A Clinical research Guide for Therapists Treating Individuals with Alcohol Abuse and Dependence*. NIAAA Project MATCH Monograph, Vol. 1, DHHS Publication No. (ADM) 92-1893, Washington, D.C.: U.S. Government Printing Office.
- O'Dell, K.J., Turner, N.H. & Weaver, G.D. (1998). Women in recovery from drug misuse: An exploratory study of their social networks and social support. *Substance Use and Misuse, 33*, 1721-1734.
- Pearson, F.S., Lipton, D.S. (1999). A meta-analytic review of the effectiveness of corrections-based treatments for drug abuse. *Prison Journal, 79*, 384-410.
- Pivnick, A., Jacobson, A., Eric, K., Doll, L. & Drucker, E. (1994). AIDS, HIV infections and illicit drug use within inner-city families and social networks. *American Journal of Public Health, 84*, 271-274.
- Project MATCH Research Group. (1997). Matching alcoholism treatments to client heterogeneity: Project MATCH posttreatment drinking outcomes. *Journal of Studies on Alcohol, 58*, 7-29.
- Schroeder, J.R., Latkin, C.A., Hoover, D.R., Curry, A.D., Knowlton, A.R., & Celentano, D.D. (2001). Illicit drug use in one's social network and in one's neighborhood predicts individual heroin and cocaine use. *Annals of Epidemiology, 11*, 389-394.
- Steinglass, P. & Wolin, S. (1974). Explorations of a systems approach to alcoholism. *Archives of General Psychiatry, 31*, 527-532.
- Strauss, S.M. & Falkin, G.P. (2001). Social support systems of women offenders who use drugs: a focus on the mother-daughter relationship. *American Journal of Drug and Alcohol Abuse, 27*, 65-89.
- Sung, H., Tabachnick, C., Feng, L. (2000). Heroin injection among addicted felons: Testing extant theories. *Deviant Behavior, 21*, 381-406.
- Tucker, J.A., Vuchinich, R.E., & Harris, C.V. (1985). Determinants of substance abuse relapse. In M. Galizio & S.A. Maisto (Eds.), *Determinants of substance abuse: Biological, psychological, and environmental factors* (pp. 383-421). New York: Plenum.
- Tucker, J.A., Vuchinich, R.E., & Gladsjo, J.A. (1990). Environmental influences on relapse in substance use disorders. *International Journal of the Addictions, 25*(7A-8A), 1017-1050.
- Van Etten, M.L., Higgins, S.T., Budney, A.J. & Badger, G.J. (1998). Comparison of the frequency and enjoyability of pleasant events in cocaine abusers vs. non-abusers using a standardized behavioral inventory. *Addiction, 93*, 1669-1680.
- U.S. Department of Justice, Bureau of Justice Statistics (1992). *Sourcebook of criminal justice statistics - 1992*. Washington, DC: U.S. Government Printing Office.
- Vuchinich, R.E. & Tucker, J.A. (1988). Contributions from behavioral theories of choice to an analysis of alcohol abuse. *Journal of Abnormal Psychology, 97*, 181-195.
- Wasserman, D.A., Stewart, A.L. & Delucchi, K.L. (2001). Social support and abstinence from opiates and cocaine during opioid maintenance treatment. *Drug and Alcohol Dependence, 65*, 65-75.

Author Note

Support for this project was provided by grant number 1 U01 DA16194-01 from the Substance Abuse and Mental Health Services Administration, and by grant number 1 R01-AA12827 from the National Institute on Alcohol Abuse and Alcoholism. Correspondence concerning this article may be addressed to: Mark D. Litt, Ph.D., Department of Behavioral Sciences and Community Health, MC3910, University of Connecticut Health Center, Farmington, CT 06030. Electronic mail may be sent to Litt@nso.uchc.edu.

Hepatitis C Among Offenders— Correctional Challenge and Public Health Opportunity

Scott A. Allen, M.D.

Josiah D. Rich, M.D., M.P.H.

Beth Schwartzapfel

Peter D. Friedmann, M.D., M.P.H.

CHRONIC INFECTION WITH hepatitis C virus (HCV) is the most common blood-borne illness in the United States, affecting nearly 2 percent of all Americans, or an estimated 4-5 million individuals (Alter et al., 1999). While most individuals with chronic infection are not expected to progress to end-stage liver disease or death, hepatitis C is the most common indication for liver transplantation in the U.S., and it is responsible for 10,000 deaths annually (NIH Consensus Statement on Management of Hepatitis C, 2002). Although HCV can be transmitted through blood and blood product transfusions, hemodialysis and high-risk sexual practices, the leading risk factor for HCV infection is injection drug use (IDU) (Alter, 1997).

While the hepatitis C epidemic is substantial in the country as a whole, it has become a major concern in correctional settings. Prevalence of HCV infection in prisons is 8- to 20-fold higher than in the community, with infection rates between 16-41 percent and evidence of chronic infection in 12-35 percent (Centers for Disease Control and Prevention, 2003). An estimated one out of three Americans with chronic hepatitis C infection rotate through correctional facilities annually (Hammett, et al., 1997). Despite slow progression of most infections, illness and death within correctional systems is already substantial, likely explained by a large number of infections acquired decades ago. Hepatitis C infection is a leading cause of illness and death among in-custody inmates in some correctional facilities (Allen, 2003; D. Reiger, personal communication, 2002) and an emerging cause in others (J. Paris, personal communication, 2003).

Natural History of the Disease and Treatment Options

Hepatitis C virus primarily affects the liver. Over time, the virus can cause inflammation, which can lead to scarring (fibrosis or cirrhosis), and in some cases, liver cancer or end-stage liver failure.

The hepatitis C virus was only identified a little over a decade ago. Consequently, accurate information regarding the natural progression of untreated disease is limited to a number of epidemiologic retrospective analyses. The most widely accepted models state that between 15-20 percent of individuals initially infected will spontaneously clear the virus without any treatment. The majority of those infected, 80-85 percent, will go on to have chronic infection (Alter, 2000).

Fortunately for those with chronic infection, progression occurs slowly over years—typically decades. In a well respected model, in a 25-year period following initial infection, 20 percent of individuals exposed to hepatitis C will develop late-stage scarring of the liver (or cirrhosis) and only 3-5 percent will develop fatal complications such as decompensated liver disease or liver cancer (hepatocellular carcinoma) (Alter, 2000). Co-infection with HIV can cause acceleration of this process, as can regular heavy alcohol use.

While the disease can be staged (determining how advanced the disease is) by means of blood work and a liver biopsy, current experience with the disease does not allow clinicians to accurately predict who will progress to end-stage complications. For that reason, most patients with established disease and evidence of scarring on liver biopsy are potential candidates for anti-viral therapy.

Over the past decade, anti-viral treatments have become available, and have steadily improved. Initially, standard interferon regimens resulted in successful eradication of virus in roughly 20 percent of those treated. With the addition of ribavirin, treatment response increased to roughly 40 percent. With the current therapy, pegylated interferon plus ribavirin has been associated with a response rate in excess of 60 percent, with a response rate as high as 80 percent for some strains of the virus. No effective vaccine is currently available.

Unfortunately, despite improvements in response to therapy, significant side effects limit the utility of treatment. Unlike HIV, where treatment may continue for an indefinite period, current hepatitis C treatments are either 24 or 48 weeks, depending on the strain of the virus and initial response to treatment. Side effects of ribavirin may include significant drops in blood counts, resulting in anemia, fatigue and shortness of breath. In addition, pegylated interferon can cause flu-like symptoms including fever, muscle aches, headache and malaise, plus a host of possible reactions including eye problems, thyroid dysfunction and lung abnormalities. Significant psychiatric adverse effects of the treatment include irritability, depression and suicidality. Therapy for hepatitis C is contraindicated in a number of conditions, including pregnancy, advanced liver disease, autoimmune disease (such as Lupus) and uncontrolled psychiatric illness, among others.

In combination with the slow smoldering course of disease, the side effect profile of available medications, and the expectation of novel treatment with higher efficacy and improved side

effect profiles in the next 3 to 5 years, patient selection for treatment is highly individualized within treatment guidelines. Treatment recommendations take into consideration a number of factors, including stage of disease (as established by clinical factors such as blood tests and liver biopsy) and co-existing chronic disease such as HIV, diabetes, heart disease and psychiatric illness. Finally, treatment requires fully informed consent of the patient regarding the risks and benefits of treatment.

In the correctional setting, duration of incarceration is often used to determine eligibility for anti-viral therapy (Proceedings of Management of Hepatitis C in Prisons Conference, 2003). As interruption in therapy can adversely affect effectiveness, treatment while incarcerated is typically reserved for those patients who will remain institutionalized for the complete period of anti-viral therapy (24 or 48 weeks depending on genotype). Treatment for patients with shorter sentences is generally safely deferred to the community.

Unfortunately for the large number of inmates being released from correctional facilities with hepatitis C, resources for evaluation and management of this disease are scarce in the community. Public health agencies have generally not been funded to address the high burden of disease in the largely uninsured, post-correctional population.

Response to Hepatitis C in Corrections

Despite the high prevalence of hepatitis C in corrections, response by correctional institutions has been measured. Most facilities have great difficulty in accessing sub-specialty evaluation for the large number of patients who are infected. While some states have developed protocols for evaluation and treatment by general internists (Allen et al., 2003), others have to date failed to offer any treatment at all. States with limited or no access to treatment have been subjected to class action lawsuits seeking access to care for infected inmates. At this time, most states and the Federal Bureau of Prisons are in the process of devising guidelines and protocols for evaluation and management of hepatitis C in the correctional setting (Proceedings of Management of Hepatitis C in Prisons Conference, 2003). In January 2003, the Centers for Disease Control and the National Commission of Correctional Healthcare sponsored a meeting of state and federal correctional healthcare professionals to encourage the sharing of data, treatment experience and strategy for correctional settings (Allen, 2003).

In rare cases, clinically advanced disease can lead to major and potentially fatal complications, with implications for sentencing, classification,

probation and parole. In the majority of cases, however, chronic hepatitis C can be safely managed within the prison setting, provided hepatitis C evaluation and treatment are accessible. For inmates undergoing active treatment—typically for 24 or 48 weeks—the significant side effects of therapy can impact on the patient's ability to participate in work and recreational activities. Consequently, timing of therapy and work assignment needs coordination.

Costs of Treatment

In addition to the human cost of treatment-related side effects, the potential financial impact on stressed correctional budgets is a major public policy concern. Funding for medical care of inmates is covered almost entirely by public funds under a constitutional obligation to provide care (*Estelle v. Gamble*, 1976). Cost for a course of treatment ranges between a low estimate of \$7,000 and a high estimate of \$20,000 per patient.

Legitimate logistic constraints resulting from short periods of incarceration result in deferral of treatment until after release for the majority of individuals incarcerated with HCV infection (J. Paris, personal communication, 2003; Allen et al., 2003). Other clinical criteria and informed consent resulting in patient decision to defer therapy further reduce the pool of candidates for treatment during the period of incarceration. While correctional facilities have been able to take advantage of reduced cost drugs in some settings, the potential cost impacts are considerable (Spaulding et al., 1999). For the foreseeable future, correctional systems will struggle to provide cost-effective care while not unreasonably limiting access to care. Anticipation of newer therapies with greater effectiveness and improved side-effect profiles can be expected to be more costly than currently available therapies.

Associated Issues: Substance Abuse and Mental Health

The strong association between remote and/or current injection drug use (IDU) and hepatitis C infection has already been described. In prisons, the vast majority of HCV infected patients acquired their infection from drug-related risk behaviors. In addition, alcoholism can have an accelerating effect on the clinical course of the infection (Schiff, 1999) and may help explain some of the more advanced clinical stages of fibrosis and cirrhosis found in some incarcerated patients.

A history of substance abuse had long been considered a relative contraindication to treatment for HCV infection. However, a careful

review of published experience has demonstrated little clinical justification for withholding treatment to HCV patients with a history of substance abuse (Edlin, 2001). In 2002, the NIH Consensus Statement on Hepatitis C removed substance abuse from the list of contraindications for anti-viral therapy. The forced sobriety of prison also provides for a window of opportunity for safe and successful treatment (Allen et al., 2003) that, when coupled with substance abuse treatment—including methadone (Tomasino et al.), education, risk reduction counseling and intervention—has the potential to reduce the risk of re-infection. Furthermore, fears about re-infection may be largely theoretical; there are only two confirmed cases of patients re-infecting themselves by drug injection after successful treatment with interferon and ribavirin (Kao et al., 2001; Dalgard et al., 2002).

Still, efforts aimed at addressing HCV in corrections need to be closely coupled with treatment and referral for the health problem of drug dependence. While no longer considered a prerequisite for access to treatment, responsible treatment protocols include counseling, referral and treatment for substance-abuse-related issues as part of their HCV program. Given the persistently high cost of medical anti-viral therapy for HCV for the minority of incarcerated infected patients who will be eligible, broader efforts aimed at dealing with the activity most closely associated with transmission of infection are critical.

Because the side effects of interferon-based anti-viral therapies include significant psychiatric side effects including major depression (Zdilar et al., 2000), caution must be exercised when considering using interferon in patients with a history of psychiatric illness. Evaluation for possible treatment should include screening for history of depression, suicidality and other significant psychiatric illness. Mental illness, including depression, anxiety, and post-traumatic stress disorder, is encountered more commonly in correctional populations than in the general public (Ditton, 1999; Beck and Maruschak, 2000). However, interferon-related depression does respond to anti-depressant medication (Hauser, 2002). Concerns about adverse psychiatric effects in individuals with histories of psychiatric disorders are extrapolated from studies reporting psychiatric side effects in patients without psychiatric diagnoses who were treated for hepatitis C (Schaefer et al., 2003). In fact, a growing body of literature supports the safety of treating hepatitis C in individuals with a history of psychiatric diagnoses (Relault et al., 1987). Hepatitis C treatment can be safely initiated in patients with a history of mental illness provided the illness is stable, a psychiatrist has evaluated and

cleared the patient, and the medical and psychiatric teams collaborate closely during the treatment period. In correctional settings where there are comprehensive mental health services, the controlled and monitored environment of a correctional facility may provide one of the safest settings in which interferon therapies can be undertaken in those with mental illness (Allen et al., 2003).

Have We Been Here Before? The HIV Experience

Corrections has faced the challenge of an epidemic of a chronic blood-borne infectious disease prior to the recognition of the hepatitis C epidemic with HIV, the virus that causes AIDS. There are similarities that may be useful to consider, and factors that make these epidemics quite distinct. The risk factors for HIV and HCV are similar, and in corrections, injection drug use accounts for the majority of both infections (Centers for Disease Control and Prevention, 2003). However, HCV is more effectively transmitted, and is consequently much more common. HIV prevalence among releasees from correctional facilities is estimated to be 2-3 percent, compared to 17-18.6 percent for HCV (National Commission on Correctional Health Care, 2002). While the majority of individuals infected with HCV will not progress to end-stage complications of liver failure, cancer and death even if untreated, the majority of HIV-infected individuals would face fatal outcome from untreated infection.

Still, there is much to learn about the current HCV epidemic from the HIV experience in corrections. First, HIV treatment programs have shown that inmates who are engaged in well-designed longitudinal treatment programs have lower recidivism rates and are more likely to practice health-conscious behaviors (Conklin et al., 1998). Second, in the early days of antiretroviral therapy for HIV, providers were often reluctant to prescribe these life-saving medications to drug users and persons with mental illness because of fears of non-adherence and potential drug interactions (Clarke and Mulcahy, 2000). However, in the context of programs that specifically address the unique needs of these populations (Mitty et al., 2002), including adherence programs for incarcerated persons (Kirkland et al., 2002), drug users and persons with psychiatric illness are consistently safely and successfully treated for HIV.

A Public Health Opportunity

Many observers understandably look at the large concentration of chronic hepatitis C within prisons as a daunting medical and fiscal challenge to

state and federal correctional systems, which indeed it is. At the same time, it is also a significant public health opportunity. One-third of Americans with a clinically silent and often undiagnosed transmissible infectious disease are congregating in jails and prisons. The majority of these individuals will return to the community. The Centers for Disease Control and Prevention estimate that 1.3 million individuals with hepatitis C, or 39 percent of all Americans with this disease, are released from correctional facilities each year. Once back in the community, infected individuals may continue to transmit the infection, particularly if they remain undiagnosed and untreated. This situation presents a rare opportunity for targeted interventions aimed at reducing spread of the virus. Including the incarcerated population in efforts to impact the burden of infectious disease is a valid and effective approach, and is now recognized as an important strategy by those in corrections and public health agencies (Glaser and Greifinger, 1993; Association of State and Territorial Health Officials, 2002).

While medical treatment of HCV has the theoretical effect of reducing the size of the infectious pool for those returning to the community, other preventive interventions, such as diagnosis of the disease, education and counseling about transmission, education about harm reduction through clean needle access, and referral and treatment for substance abuse make sense from a public health and safety perspective. Related cost-effective interventions, such as vaccination of HCV-infected inmates against hepatitis B (whose co-infection could accelerate liver failure) would also save money and lives for states and localities (Rich et al., 2003).

Conclusions

Hepatitis C is a significant problem for individuals involved with the correctional justice system nationally. This epidemic has significant policy and fiscal implications, and correctional institutions are in the early stages of developing systematic responses to the epidemic. A significant minority (39 percent) of Americans infected with the virus congregates in correctional institutions. This situation provides a unique opportunity to diagnose, educate and treat appropriate individuals, and to reduce transmission in the community upon the inmate's release.

While diagnosis, evaluation and treatment has significant medical implications for individual patients, access to proper medical care after prison also has the potential to influence future criminal behavior. Linkage of incarcerated HIV-seropositive patients to medical care upon prison release has been associated with improved access to

health services and reduced recidivism (Flanigan et al., 1996; Kim et al., 1997). Addressing the factors that influence the ability to tolerate HCV treatment (substance abuse, stable mental health, social support) will likely also reduce recidivism. In substance abuse treatment settings, linkage to medical care is associated with improved addiction-related outcomes (Friedmann et al., 2003). The same positive effect on recidivism and addiction outcomes will likely accrue to drug-involved prison releasees who become motivated to address their HCV infection. Continuity of care will help the drug-involved offender develop "trust in the system," work toward rehabilitative goals and community readjustment (Mitty et al., 1998), and address mental health and substance abuse issues as part of community management of HCV.

Systematic approaches to the hepatitis C epidemic in corrections are needed. Unlike the early days of the HIV epidemic, which spawned a highly organized, politically influential constituency, incarcerated individuals with substance abuse histories have few advocates. As a result, the public and legislative response to hepatitis C in corrections has been muted. The public health and fiscal implication of this epidemic, however, warrant a more proactive response. Cost-effective interventions, such as targeted screening, health education and individual counseling, clean needle access, immunization against hepatitis B and substance abuse treatment, should form the foundation of that response.

References

- Allen, S.A., Spaulding, A.C., Osei, A.M., et al. 2003. Treatment of chronic hepatitis C in a state correctional facility. *Annals of Internal Medicine*, 138:187-190.
- Allen, S.A. Developing a Systematic Approach to Hepatitis C for Correctional Systems: Controversies and Emerging Consensus. HEPP Report: Infectious Diseases in Prison. Available at: <http://www.hivincorrections.org/mainarticle/mainarticle.html>. Last accessed 4-21-03.
- Alter, H.J., Seeff, L.B. 2000. Recovery, persistence, and sequelae in hepatitis C virus infection: A perspective on long-term outcome. *Seminars in Liver Disease*, 20:17-35.
- Alter, M.J., Kruszon-Moran, D., Nainan, O.V., McQuillan, G.M., Gao, F., Mayer, L.A., et al. 1999. The prevalence of hepatitis C virus infection in the United States, 1988 through 1994. *The New England Journal of Medicine*, 341:4556-562.
- Alter, M.J. 1997. Epidemiology of hepatitis C. *Hepatology*, 26 (suppl 1):62S-65S.
- Association of State and Territorial Health Officials. Hepatitis C and Incarcerated Populations: The Next Wave for Correctional Health Initiatives. Washington DC: Association of State and Territorial Health Officials, 2002.
- Beck, A.J., Maruschak, L.M. 2001. Mental health treatment in state prisons, 2000. Bureau of Justice Statistics, NCJ 188215.
- Centers for Disease Control and Prevention 2003. Prevention and control of infections with hepatitis viruses in correctional settings. *MMWR. Morbidity and Mortality Weekly Report*, 52 (no RR-1): 1-38).
- Clarke, S.M., Mulcahy, E.M. 2000. Antiretroviral therapy for drug users. *International Journal of STD & AIDS*, 11:627-631.
- Conklin, T.J., Lincoln, T., Flanigan, T.P. 1998. Public health model to connect correctional health care with communities. *American Journal of Public Health*, 88:1249-1250.
- Dalgard, O., Bjoro, K., Hellum, K., et al. 2002. Treatment of chronic hepatitis C in injecting drug users: 5 years' follow-up. *European Addiction Research*, 8:45-9.
- Ditton, P.M. 1999. Mental health and treatment of inmates and probationers. Bureau of Justice Statistics, NCJ 174463.
- Edlin, B.M., et al. 2001. Is it justifiable to withhold treatment for hepatitis C from illicit-drug users? *New England Journal of Medicine*, 345:211-214.
- Flanigan, T.P., Kim, J.Y., Zierler, S., Rich, J.D., Vigilante, K.C., Bury-Maynard, D. 1996. A prison release program for HIV positive women: Linking them to health services and community follow-up. *American Journal of Public Health*, 86(6):886-887.
- Friedmann, P.D., Zhang, Z., Hendrickson, J., Stein, M.D., Gerstein, D.R. 2003. Effect of primary medical care on addiction and medical severity in substance abuse treatment programs. *Journal of General Internal Medicine*, 18(1):1-8.
- Glaser, J.B., Greifinger, R.B. 1993. Correctional health care: A public health opportunity. *Annals of Internal Medicine*, 118:139-145.
- Hammett, T.M., Harmon, M.P. Rhodes W. 2002. The burden of infectious disease among inmates of and releasees from US correctional facilities, 1997. *American Journal of Public Health*, 92(11):1789-94.
- Hauser, P.A. 2002. A prospective study of the incidence and open-label treatment of interferon-induced major depressive disorder in patients with hepatitis C. *Molecular Psychiatry*, 7:942-947.
- Kao, J.H., Lai, M.Y., Chen, P.J., Chen, D.S. 2001. Probable reinfection with hepatitis C virus in a chronic hepatitis C patient with a sustained response to combination therapy. *Journal of the Formosan Medical Association = Taiwan yi zhi*, 100:824-8.
- Kim, J.Y., Rich, J.D., Zierler, S., Lourie, K., Vigilante, K.C., Normandie, L., et al. 1997. Successful Community Follow-up and Reduced Recidivism in HIV Positive Women Prisoners. *Journal of Correctional Health Care*, 4(1):5-17.
- Kirkland, L.R., Fischl, M.A., Tashima, K.T., et al. 2002. Response to lamivudine-zidovudine plus abacavir twice daily in antiretroviral-naive, incarcerated patients with HIV infection taking directly observed treatment. *Clinical Infectious Diseases*, 34:511-8.
- Mitty, J.A., Stone, V., Sands, M., et al. 2002. Directly observed therapy for the treatment of people with human immunodeficiency virus infection: A work in progress. *Clinical Infectious Diseases*, 34; 984-990.
- Mitty, J.A., Holmes, L., Spaulding, A., Flanigan, T., Page, J. 1998. Transitioning HIV-infected women after release from incarceration: Two models for bridging the gap. *Journal of Correctional Health Care*, 5(2):239-254.
- National Commission on Correctional Health Care. Health status of soon-to-be-released inmates: a report to Congress. Vol 1. Washington, DC: National Commission on Correctional Health Care, 2002.
- National Institutes of Health. 2002. National Institutes of Health Consensus Development Conference Statement: Management of hepatitis C: 2002—June 10-12, 2002. *Hepatology*, 36(5 Suppl 1):S3-20.
- Proceedings of Management of Hepatitis C in Prisons Conference; 2003 Jan 25-26; San Antonio, Texas.
- Relault, P.F., Hoofnagle, J.H., Park, Y., Mullen, K.D., et al. 1987. Psychiatric complications of long-term interferon alpha therapy. *Archives of Internal Medicine*, 147:1577-1580.
- Rich, J.D., Ching, C.G., Lally, M.A., Gaitanis, M.M., Schwartzapfel, B., Charuvastra, A., Beckwith, C.G., Flanigan T.P. 2003. A review of the case for hepatitis B vaccination of high-risk adults. *American Journal of Medicine*, 114(4):316-8.
- Schaefer, M. 2003. Adherence and mental side effects during hepatitis C treatment with interferon alfa and ribavirin in psychiatric risk groups. *Hepatology*, 37(2): 449.
- Schiff, E.R. 1999. The alcoholic patient with hepatitis C virus infection. *American Journal of Medicine*, 107:95S-99S.
- Spaulding, A., Greene, C., Davidson, K., Schneiderman, M., Rich, J. 1999. Hepatitis C in state correctional facilities. *Prevention Medicine*, 28: 92-100.

Tomasino, V, Swanson, A.J., Nolan, J., Shuman, H.I. 2001. The Key Extended Entry Program (KEEP): A Methadone Treatment Program for Opiate-Dependent Inmates. *The Mount Sinai Journal of Medicine*, 68: 14-20.

Williams, I.T., Fleener, M., Judson, F., et al. 2000. Risk factors for hepatitis C virus (HCV) transmission in the USA: 1991-1998 [Abstract 114]. Presented at the 10th International Symposium on Viral Hepatitis and Liver Disease. Atlanta, GA.

Zdilar, D., Franco-Bronson, K., Buchler, N., Locala, J.A. & Younossi, Z.M. 2000. Hepatitis C, interferon alfa, and depression. *Hepatology*, 31(6), 1207-1211.

Acknowledgements

The work described was supported, in part, by grant number P30-AI-42853 from the National Institutes of Health, Center for AIDS Research (NIH CFAR); and by grant number H79-TI-014562 from The Center for Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration (SAMHSA CSAT) and U01-DA016191-01 from the National Institute on Drug Abuse. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the awarding Agencies.

An Employment Intervention for Drug-Abusing Offenders

*Carl Leukefeld, Hope Smiley McDonald,
Michele Staton, Allison Mateyoke-Scriver,
Matthew Webster, TK Logan, & Tom Garrity*

EMPLOYMENT IS an important part of drug and alcohol treatment as well as a measure of treatment outcome (Institute of Medicine, 1990). Studies have consistently reported that employment contributes to drug and alcohol treatment success (Platt, 1995; Wolkstein and Spiller, 1998). These studies also suggest that daily structure, including employment and cognitive approaches like relapse prevention models (Gorski, 1990; Marlatt and Gordon, 1985), are important for treatment success. Not only does employment establish a source of steady income, but it has also been found to minimize relapse and reduce involvement in criminal activity for the recovering drug addict (Inciardi, et al., 2002; Platt, 1995; Vaillant, 1988).

Other studies focused on pre- and post-treatment employment have consistently shown that employment predicts improved and successful treatment. For example, stable employment has a protective role in drug and alcohol treatment retention (see Platt, 1995 and McLellan, 1983 for literature reviews). Employment also is associated with reduced drug and alcohol use (Hammer et al., 1985; Vaillant, 1988; Zanis et al., 1994); with decreased severity of relapse (Vaillant, 1988); with increased post-treatment outcomes (Comerford, 1999); and with community reintegration (Comerford, 1999; Platt, 1995; Room, 1998). In a longitudinal study of heroin and alcohol patients, Vaillant (1988) concluded that unstable employment was a better predictor of relapse than addiction severity.

Stable employment conditions are related to other variables that contribute to treatment outcomes. Employed clients are more likely to report healthier social and professional networks, which are related to improved self-esteem, self-worth,

and a sense of independence that contribute to reduced drug and alcohol use (Brewington et al., 1987; Comerford, 1999; Room, 1998). In addition, stable employment is associated with lowered depression scores (Zanis et al., 1994). Overall, the more stable employment, the more likely it is that clients in recovery will have positive treatment outcomes.

Since many drug abusers are unemployed when they seek treatment, employment-focused services should complement drug and alcohol treatment (Comerford, 1999; French et al., 1992; Hubbard et al., 1984; Walker and Leukefeld, 2002). Employment services include vocational rehabilitation, which can incorporate case management, job placement, job skills training, education, and vocational training. Each of these approaches focuses on helping clients obtain, maintain, and upgrade employment (Walker and Leukefeld, 2002). Employment services, which are frequently not emphasized, are often reported by clients as desirable since employment is a personal goal (Staton, et al., 2002; Zanis et al., 1994).

For criminally-involved drug and alcohol abusers, getting a job and keeping a job can be challenging, especially when there are few community-level employment and vocational rehabilitation services available (Walker and Leukefeld, 2002; Platt, 1995). Nevertheless, in a recent study, probation officers reported that helping probationers maintain employment was a key contribution to successful community re-entry (Seiter, 2002). With the emergence of Drug Courts, the criminal justice system is targeting employment as an important part of successful drug abuse treatment.

The cornerstones of Drug Court programs include the use of treatment services with justice

system processing, the use of frequent drug testing to monitor abstinence, mandatory employment, and ongoing judicial interaction with Drug Court participants. The Drug Court model was designed to decrease drug use and to divert nonviolent drug abusers from incarceration. In Kentucky, Drug Court judges were interested in providing employment services to Drug Court clients, since full-time employment is a Drug Court requirement. Judges indicated that stable employment would not only provide a foundation for enhancing job skills, but also would contribute to getting a better job.

In this article, the authors will: 1) describe an employment project and the project's intervention, used in Kentucky Drug Courts, which is grounded in established job readiness and social skills training approaches; and 2) profile project participants by employment history, drug use, criminal involvement, and health service utilization.

Purpose and Design

The overall purpose of the Drug Court employment trial, which is supported by the National Institute on Drug Abuse (Grant DA#RO1 13076), is to enhance existing services in two Kentucky Drug Courts by implementing and examining an enhanced intervention focused on obtaining, maintaining, and upgrading employment. The overall project goals are:

- 1) To implement and test the effectiveness of an enhanced employment intervention that focuses on obtaining, maintaining, and upgrading employment among Drug Court participants by randomly assigning study participants to an enhanced intervention or a

- control condition — Drug Court as usual — and to follow-up study participants who graduate and terminate in order to examine outcomes;
- 2) To examine a causal model in which the enhanced employment intervention increases problem recognition and motivation to change problem behaviors, and decreases employment barriers, consequently decreasing drug use and criminal behavior; and,
 - 3) To evaluate the cost of the interventions and the cost-effectiveness of the enhanced intervention relative to Drug Court as usual.

The overall design includes the recruitment, intervention, and follow-up of 500 Drug Court participants using a pre-test/post-test experimental design with random assignment to Drug Court as usual and to an enhanced employment intervention. Follow-ups are included to examine the Drug Court employment intervention. The two Drug Court sites selected for the project are Fayette County Drug Court (Lexington, KY) and Warren County Drug Court (Bowling Green, KY). Drug Court clients are recruited into the study within 30 days after entering Drug Court. After a client consents, a face-to-face baseline interview is administered. The baseline interview includes measures of employment, drug and alcohol use, criminal justice involvement, health and mental health, and HIV risk behavior. During the informed consent process, participants are told that study participation includes random assignment to the enhanced employment intervention or to “treatment as usual.” Participants are paid for completing baseline interviews and follow-up interviews. After completing a baseline interview, participants are randomized. Participants randomized into the enhanced intervention receive the enhanced employment intervention in addition to standard Drug Court treatment. Data

are collected from participants in the intervention group and the comparison group again at 12-, 18-, and 24-month follow-ups.

The Intervention

The employment intervention, which is grounded in established job readiness and life skill training approaches, was developed by the project team. Three established interventions were modified and are incorporated into the employment intervention and manual: the Ex-Inmates Guide to Successful Employment (Sull, 1998), Job Readiness Activity (State of Kentucky, 1995), and Offender Employment Specialist Manual (NIC, 1997). In addition, established clinical approaches used with substance abuse clients are incorporated. These approaches include job skill training, social skills training (Leukefeld, et al., 2000), strengths-based case management (Siegal et al., 1996), thought mapping (Leukefeld et al., 2000), structured stories (Leukefeld et al., 2000), and motivational interviewing (Miller and Rollnick, 1991).

The employment intervention was developed through the use of focus groups. These focus groups were composed of Drug Court participants who were asked to identify critical factors related to obtaining, maintaining, and upgrading employment skills (see Staton et al., 2002). A salient focus group finding was that participants indicated that Drug Court clients had difficulty balancing stable employment with the rigorous and strict Drug Court treatment regimen, especially clients with familial responsibilities. References were made to the need for Drug Court client requirements to make regular court appearances, participate in weekly group sessions and Alcoholics Anonymous/Narcotics Anonymous meetings, and be available to give random urine screens while maintaining steady, fulltime employ-

ment. Since these requirements often conflict with 9:00 to 5:00 jobs, focus group participants noted that it was critical to find a job that had flexible hours, an understanding supervisor, and/or a night shift.

Focus group participants also expressed their desire for job readiness training, job placement, and job networking opportunities. Participants were concerned with preparing effective resumes and wanted tips on how to conduct themselves in job interviews, particularly when “tough” questions were asked about their “past.” Participants noted that oftentimes, when a potential employer found out about their criminal record, they were no longer considered a viable job applicant. Thus, overcoming a criminal record was cited as a major barrier to employment.

In total, three focus groups were conducted before the employment intervention was implemented in the urban (Lexington, KY) and the rural (Bowling Green, KY) Drug Courts. Focus group participants provided key insights and feedback regarding service needs that strengthened the overall content as well as the delivery of the employment intervention.

Grounded in the focus group findings, employment manuals, and established clinical approaches, the enhanced Drug Court employment intervention was implemented by trained clinicians who had prior experience in employment and substance abuse counseling. The employment intervention services were provided in the afternoons and evenings at Drug Court facilities and at the project site, with the approval of Drug Court staff. The intervention includes three phases designed to coincide with Drug Court—obtaining employment, maintaining employment, and upgrading employment (See Table 1).

Motivational interviewing, structured stories, and thought-mapping are used in weekly group sessions (see Leukefeld, et al., 2000). Individual sessions incorporate motivational

TABLE 1
Employment Intervention Phases

Phase	Length of time	No. of individual sessions	No. of group sessions	Content
I. Obtaining Employment	4-5 weeks	5	5	Obtaining immediate employment, employment behavioral contracting, and job readiness assessment
II. Maintaining Employment	13-15 weeks	5	13	Resolving conflicts at work, setting goals and problem solving, and life skills development
III. Upgrading Employment	6 weeks	1	6	Identifying possible employers, job development, and job placement

interviewing, behavioral contracting, and strengths-based case management to focus on problem-solving, job searches, filling out job applications, resume writing, and job interviewing. Individual sessions also help direct participants who are struggling with particular issues that impede their employment success (e.g., continued use of drugs and alcohol, co-workers who use drugs on the job, conflict with co-workers, and criminal thinking).

Findings

This analysis includes 500 drug court clients at baseline interview who consented to participate in the project, of which 65 percent are male and 35 percent are female. The majority of participants are white (62 percent), the average age is 31 years, the average number of years of education is 11.8, and about 18 percent are married.

Table 2 presents baseline characteristics which were reported at Drug Court entry for employment history, drug/alcohol use, criminal involvement, and health/health service utilization. When Table 2 is examined, we find less than half (44 percent) of the participants were working full-time before entering Drug Court. Participants averaged 3.7 jobs in the five years before entering Drug Court; the longest period of time participants held a full-time job in their lifetime averaged 4.3 years. Participants reported they were paid for 80.4 days at a legal job in the six months before entering Drug Court and 48.1 days at an illegal job. Most of the participants reported their last or usual occupation was a service worker or non-farm laborer. Forty-one percent (41 percent) reported employment problems in the six months before Drug Court and about one-fourth (28 percent) indicated that these employment problems "bothered them." Transportation, job placement, and job training were cited as the primary types of help needed to get and keep a job.

Alcohol, marijuana, and crack/cocaine were the major drugs used among this population. In fact, participants averaged an estimated seven years of regular lifetime use of alcohol and marijuana, six years of regular use of multiple substances, and about five years of regular crack/cocaine use. In the 30 days before entering Drug Court, participants used marijuana for an average of almost nine days, alcohol for about eight days, and crack/cocaine for about eight days. Participants also averaged ten days of multiple drug use during this same period. Despite the majority who reported regular use of alcohol, marijuana, and crack/cocaine, only one-third (33 percent) reported receiving any treatment for their drug use and 4 percent reported receiving any alcohol treatment.

Although the average age of first adult incarceration was almost 23, almost one-third (32

percent) of participants reported being incarcerated before the age of 18. In addition, participants reported they had been incarcerated an average of 4 times after a conviction.

Participants indicated that they experienced health problems. Specifically, participants reported an average of over three weeks (24 days) of medical problems in the six months before entering Drug Court. However, only a little more than one-fourth (28 percent) indicated they were covered by health insurance. Participants also reported a number of hospital visits (12 visits on average) and a number of visits to the emergency room (27 visits on average).

Participants identified a number of mental health problems. Specific mental health problems included lifetime depression at 44 percent, anxiety at 38 percent, cognitive problems at 27 percent, and problems with violent behavior at 26 percent. In addition, 26 percent indicated that they had been prescribed a medication for a mental health problem, while only 11 percent reported being treated as an outpatient for a psychological or emotional problem.

Discussion

Being employed is an important part of treatment, which includes Drug Court treatment. Drug Court clients as well as Drug Court judges identified employment as a critical part of treatment. In fact, stable employment is a requirement for Drug Court clients. Specific interventions have been developed to help drug abusers and others get a job and keep a job (Sull, 1998 and NIC, 1997). However, few employment interventions incorporate skills sessions that target getting a better job or upgrading employment, which is the focus of this employment project.

An examination of 500 participants at Drug Court entry who consented to participate in the Kentucky project revealed that less than one-half worked full-time before entering Drug Court; participants averaged 3.7 jobs in the five years before entering Drug Court; and the longest full-time job held averaged 4.3 years with 80.4 days of employment at a legal job in the six months before entering Drug Court. As expected, a majority of participants reported their last or usual occupation as a service worker or as a laborer. Transportation, job placement and job training were identified as the types of employment help most needed, which reinforced the finding that almost half (41 percent) reported employment problems in the six months before entering Drug Court.

Employment sessions targeted transportation needs, which included interventionists schedul-

ing individual and group sessions around bus schedules, as well as around work hours. Since many of the participants wanted more job training and job placement help, particular attention was given throughout the intervention to resume development, vocational assessment, job interview training, and assisting clients in conducting job searches. Additional job placement help and vocational assessment were provided to participants with mental health and/or physical health limitations, since these limitations had prohibited employment and/or contributed to employment problems. In addition, interventionists provided appropriate referrals to health and mental health care professionals.

At baseline, many participants (41 percent) indicated that they had experienced employment problems in the past six months, some of whom noted that these problems "bothered" them significantly (28 percent). The intervention was designed to target particular employment problems. Specific sessions incorporated life skills training, such as anger management, on-the-job problem-solving, and assertiveness, which were incorporated into the intervention to target employment problems. Similar to the focus group findings, many participants had difficulty balancing their Drug Court requirements, their employment, and their family responsibilities. The intervention included sessions that focused on time management, budgeting, and stress management so that participants could learn how to cope with these realities.

Participants anecdotally reported an increase in self-confidence after preparing their resume and practicing identifying their personal employment strengths and talents. Participants also described a change in how they viewed work and employers in general. Some participants, who initially described work as a waste of time with low entry-level wages, viewed themselves as "investments for employers" and someone an employer can trust. Other participants realized that they could "overcome" problems associated with their criminal record and job history and were capable of finding successful employment and academic pursuits.

There are several limitations to the project, including the fact that Drug Court program eligibility determined study eligibility. In addition, participants are not a representative sample of drug abusers; the study only includes two drug courts; and self-reported behaviors are used, whose reliability can be limited by recall and truthfulness. In spite of these limitations, the expected project findings should increase the understanding of employment and help to better understand employment interventions which target drug

TABLE 2
Participant Characteristics Before Drug Court (N=500)

<i>Employment history before Drug Court (DC)</i>		
Percent working full-time prior to DC		44%
Mean number of different jobs in past 5 years		3.7
Mean length of longest full-time job (years)		4.3 years
No. of days paid for legal job in 6 months before DC	Mean:	80.4 days
	0 days:	32%
	1-90 days:	26%
	91-180 days:	41%
No. of days paid for illegal job in 6 months before DC	Mean:	48.1 days
	0 days:	62%
	1-90 days:	14%
	91-180 days:	24%
Percent reported employment problems in 6 mos. before DC		41%
Percent bothered by employment problems 6 mos. before DC		28%
Usual or last occupation		19% Service Worker
		15% Nonfarm labor
Major type of help needed to find or keep a job		34% Transportation
		21% Job placement help
		17% Job training
<i>Drug use before Drug Court (DC)</i>		
	Mean years of lifetime use	30 day use before DC
Alcohol	7.2	8.4
Marijuana	7.0	8.9
Crack/Cocaine	4.7	8.3
Multiple Substances	6.1	10
<i>Criminal involvement prior to Drug Court (DC)</i>		
Percent incarcerated before age 18		32%
Mean age of first adult incarceration		23.4
Mean number of times incarcerated after a conviction		4.3
<i>Health and health service utilization patterns before Drug Court (DC)</i>		
Percent reported ever receiving alcohol abuse treatment only		4%
Percent reported ever receiving drug abuse treatment only		33%
Mean number of days experienced medical problems in 6 mos. before DC		23.5
Percent currently covered by public or private health insurance		28%
Mean number of times seen in an emergency room in lifetime		27.1
Mean number of times admitted to a hospital in lifetime		12.1
Percent treated as outpatient for psychological/ emotional problems		11%
Percent reporting lifetime:		
Depression		44%
Anxiety		38%
Hallucinations		7%
Cognitive Problems		27%
Problems with violent behavior		26%
Thoughts of suicide		17%
Attempted suicide		13%
Prescribed psychological medications		26%

abusers involved in the criminal justice system.

The preliminary evidence suggests that Drug Court clients should participate in employment-related activities to enhance their employment. The employment intervention is innovative because of its emphasis on upgrading employment. Future project studies will examine differences in participants who are randomized into the enhanced employment intervention when compared with those who are randomized into Drug Court as usual. Participants involved in the enhanced intervention are expected, for example, to remain in Drug Court longer, to be more employed, and to upgrade their employment more often. In addition, the enhanced intervention manual could be useful for practitioners who are interested in increasing employment for drug abusers involved in the criminal justice system.

References

- Brewington, V.; Arella, L.; Deren, S.; Randell, J. Obstacles to the Utilization of Vocational Services: An Analysis of the Literature. *The International Journal of the Addictions* **1987**, 22(11), 1091-1118.
- Comerford, A. W. Work Dysfunction and Addiction: Common Roots. *Journal of Substance Abuse Treatment* **1999**, 16, 247-253.
- French, M.T.; Dennis, M.L.; McDougal, G.L.; Karuntzos, G.T.; Hubbard, R.L. Training and Employment Programs in Methadone Treatment: Clients Needs and Desires. *Journal of Substance Abuse Treatment* **1992**, 9, 293-303.
- Gorski, T. The CENAPS model of relapse prevention: Principles and procedures. *Journal of Psychoactive Drugs* **1990**, 22, 125-133.
- Hammer, T.; Ravndal, E.; Vaglum, P. Work is Not Enough: A Quasi-Experimental Study of a Vocational Training Program for Young Drug and Alcohol Abusers. *The Journal of Drug Issues* **1985**, 15(3), 393-403.
- Hubbard, R.L.; Rachal, J.V.; Craddock, S.G.; Cavanaugh, E.R. Treatment Outcome Prospective Study (TOPS): *Client characteristics and behaviors before, during and after treatment*, Drug Abuse Treatment Evaluation: Strategies, Progress, and Prospects. Monograph Series 51 (DHHS ADM 84-1329). Rockville, MD: NIDA, 1984.
- Inciardi, Surratt, Martin, and Hooper, in Leukefeld, C., Tims, F. Farabee, D. *Treatment of Drug Offenders*, Springer, New York, 2002.
- Institute of Medicine. *Treating drug problems (Vol. 1)*. Washington, DC: National Academy Press, 1990.
- Leukefeld, C.G., Godlaski, T., Clark, J., Brown, C., Hays, L. (2000). *Behavioral Treatment for Rural Substance Abusers*. Lexington, KY: University Press of Kentucky.
- Marlatt, G. A.; Gordon, J. R. *Relapse Prevention*. Guilford Press: New York, 1985.
- McLellan, A.T. (1983). Patient characteristics associated with outcome. In J.R. Cooper, F. Altman, B.S. Brown, D. Czechowicz (Eds.), *Research on the treatment of narcotic addiction: State of the art* (DHHS Publication No. ADM 87-1281, p. 500-529). Washington, DC: United States Government Printing Office.
- Miller, W.R. Rollnick, S.(1991). *Motivational interviewing*. New York: Gilford Press.
- National Institute of Corrections, 1997. *Employing Offenders*. Longmont, CO: NIC.
- Platt, J. J. Vocational Rehabilitation of Drug Abusers. *Psychological Bulletin* **1995**, 117(3), 416-433.
- Room, J. A. Work and Identity in Substance Abuse Recovery. *Journal of Substance Abuse Treatment* **1998**, 15(1).
- Seiter, R. P. *Prisoner Reentry and the Role of Parole Officers*. Federal Probation 2002, 66(3), 50-55.
- Siegal, H. A.; Fisher, J H.; Rapp, R. C.; Kelliher, C.W.; Wagner, J. H.; O'Brien, W. F.; Cole, Phyllis A. Enhancing Substance Abuse Treatment with Case Management. *Journal of Substance Abuse Treatment* **1996**, Vol. 13, 2, 93-98.
- State of Kentucky, 1995. *Job readiness activity manual*. Frankfort, KY: Department for Employment Services.
- Staton, M.; Mateyoke, A.; Cole, J.; Hopper, H.; Logan, T.K.; Leukefeld, C. Employment issues among drug court participants, *Journal of Offender Rehabilitation* **2002**, 33(4), 73-85.
- Sull, E.C. 1998. *The ex-inmate's complete guide to successful employment*. Buffalo, NY: The Correctional Education Company.
- Walker, R. Leukefeld, C "Employment Rehabilitation" in Leukefeld, Tims, F.; Farabee, D *Treatment of Drug Offenders*. Springer: New York, 2002, 69-79.
- Vaillant, G. E. What Can Long-Term Follow-up Teach us about Relapse and Prevention of Relapse in Addiction. *British Journal of Addiction* **1988**, 83, 1147-1157.
- Wolkstein, E.; Spiller, H. Providing Vocational Services to Clients in Substance Abuse Rehabilitation. *Directions in Rehabilitation Counseling* **1998**, 9, 65-77.
- Zanis, D. A.; Metzger, D. S.; McLellan, T. Factors Associated with Employment among Methadone Patients. *Journal of Substance Abuse Treatment* **1994**.

Co-Occurring Substance Use and Mental Disorders in Offenders: Approaches, Findings and Recommendations

*Stanley Sacks, Ph.D. and Frank S. Pearson, Ph.D.
Center for the Integration of Research and Practice
National Development and Research Institutes, Inc.*

What Are Co-Occurring Disorders?

According to the Center for Substance Abuse Treatment (CSAT) Treatment Improvement Protocol (TIP), Substance Abuse Treatment for Persons With Co-Occurring Disorders,

... Clients said to have co-occurring disorders have one or more mental disorders as well as one or more disorders relating to the use of alcohol and/or other drugs. A diagnosis of co-occurring disorders (COD) occurs when at least one disorder of each type can be established independently of the other and is not simply a cluster of symptoms resulting from the one disorder. (CSAT, 2003, Chapter 1).

Replacing older terms such as “dual diagnosis,” “mentally ill chemical abusers,” and “comorbidity,” “co-occurring disorders” can encompass the full range of mental disorders, including depression, mood disorders, schizophrenia and personality disorders. This article summarizes the research on the prevalence of COD in offender populations, and the implications for treatment. Some principles and approaches guiding the treatment of offenders with COD are reviewed, the emerging evaluation research reports are reviewed, and recommendations for treatment and future research are provided.

Prevalence and Seriousness of the Problem

Prevalence denotes, within a specific population, the percentage of persons who have a particular disorder, while incidence denotes the percentage of a population with new cases (e.g., in a six-month period) (Merriam-Webster, 2003; Hendrie et al., 2001). In the 1980s and 1990s, substance abuse treatment programs reported that 50 to 75 percent of their clients had co-occurring mental disorders, while mental health clinics reported that between 20 and 50 percent of their clients had a co-occurring substance use disorder (see Sacks et al. 1997 for a summary of

studies.). The prevalence of mental illness and substance abuse among incarcerated offenders was examined by Powell, Holt, and Fondacaro (1997) in a review of 13 studies published between 1982 and 1995. The percentages of offenders who were reported to have diagnoses of common types of mental illness and substance use (not necessarily COD) compiled from the eight most recent of these studies (published from 1990 through 1997) are shown in Table 1.

Recent surveys by the Bureau of Justice found that “16 percent of State prison inmates, 7 percent of Federal inmates, and 16 percent of those in local jails reported either a mental condition or an overnight stay in a mental hospital” (Ditton

TABLE 1

Prevalence of some typical disorders as reported in studies of jails and prisons published 1990 to 1997.

Disorder	N of Studies	Median %	Range
Alcohol dependence	8	73%	47% to 82%
Drug dependence	6	59%	32% to 64%
Antisocial	7	51%	41% to 64%
Depression	7	10%	5% to 17%
Dysthymia	7	7%	2% to 11%
Schizophrenia	6	4%	2% to 5%

Source: These statistics were computed from the data presented in Tables 1, 2, and 4 in Powell, Holt, and Fondacaro (1997). Some used 6-month criteria, others lifetime criteria; see the source for details.

1999). Direct evidence on the prevalence of COD among offenders has been reported, some of which indicates that the incidence of COD is increasing. *The Survey of Inmates of Local Jails—1983*, which compiled interview responses from 5,785 inmates in 407 institutions, categorized 15.4 percent as both mentally ill and substance abusing (Canales-Portalatin, 1995). A randomized, stratified sample of 1,829 delinquent youth ages 10-18 admitted to the Cook County (Chicago) Juvenile Temporary Detention Center found that nearly 50 percent of detainees were diagnosed with alcohol or drug dependence, and that almost 66 percent of boys and 73 percent of girls were diagnosed with one or more psychiatric disorders. These statistics provide the context for the incidence of COD, with 28 percent of the sample exhibiting both a conduct/behavior disorder and a substance abuse/dependence disorder (National Institute of Justice, 2000: 31; National Institute of Mental Health, 2002).

A clinical assessment of offenders in the Colorado Department of Corrections shows trends of COD over the last decade. Kleinsasser and Michaud (2002), counting current diagnoses, not lifetime, report that mental disorders within this offender population increased from 3.9 to 14.0 percent between 1991 and 2001, and about three quarters of these had substance use disorders.

The challenges of treating clients with serious mental illness (SMI) and substance use disorders are apparent. A study of 121 clients with psychoses included 36 percent who were diagnosed with a co-occurring substance use disorder; this latter group spent twice as many days in hospital over the two years prior to treatment as did their non-substance abusing counterparts (Crome 1999, p. 156; Menezes et al. 1996). Other studies (Drake et al. 1998; U. S. Department of Health & Human Services, 1999) have documented poorer outcomes for clients who have SMI co-occurring with substance use disorders, in terms of higher rates of HIV infection, relapse, rehospitalization, depression, and risk of suicide. Involvement with the criminal justice system further complicates treatment for those with COD, and initiatives specific to the needs and functioning of COD offenders have been developed. The next section begins with a list of principles recommended by experts to guide the treatment of offenders with COD and is followed by a summary of some emerging programs.

Approaches to Treatment for Offenders with COD

In 1999, a meeting of major treatment policy makers introduced a model for COD levels of care, endorsed by the Substance Abuse and Mental Health Services Administration (SAMH-

SA), which is defined by four “quadrants” (National Association of State Mental Health Program Directors and National Association of State Alcohol and Drug Abuse Directors, 1999). The quadrant model can be used both to design systems/programs and to determine whether or not a client’s treatment is at the appropriate level of care. The disorders and needs of clients in each quadrant are: 1) Less severe mental disorder and less severe substance use disorder—treatment in outpatient settings of either mental health or chemical dependency programs, with consultation or collaboration between settings as needed; 2) More severe mental disorder and less severe substance disorder—treatment in intermediate level mental health programs using integrated case management; 3) Less severe mental disorder and more severe substance disorder—treatment in intermediate level substance use disorder treatment programs, with mental health program collaboration as needed; 4) More severe mental disorder and more severe substance disorder—treatment with intensive, comprehensive and integrated services for both substance use and mental disorders, available in a variety of settings (e.g., correctional institutions, state hospitals, or residential substance abuse treatment programs). Of course, COD is not just a health care problem; concerns of justice and legal rights are involved as well. Treatment should be delivered within the bounds of law and justice, not ignoring these principles (see, for example, Davis, 2003; Denckla & Berman, 2001; The Judge David L. Bazelon Center for Mental Health Law, 2003).

Diversion

In this context, diversion is a strategy of first identifying those COD offenders who are less of a threat to the community, then redirecting them away from the standard flow of criminal justice cases. For example, selected types of arrestees awaiting trial may be diverted to treatment prior to trial or to sentencing. Diversion saves criminal justice resources for more serious crimes and higher-risk offenders, and provides treatment to these individuals much sooner than is possible under normal criminal justice processing. Effective diversion emphasizes “...learning how to collaborate with law enforcement personnel...and ensuring that clients who are intensively monitored are also provided with adequate treatment to avoid jail recidivism” (Draine and Solomon, 1999: 56).

Screening and Assessment

A program is responsible to conduct screening that identifies those who might harm themselves or others, as well as those who show evidence of

an incapacitating mental disorder. Preliminary evidence of COD is uncovered through a basic assessment, which also examines diagnoses, criminal history, and readiness for change, problems and strengths, to provide the counselor with sufficient data for treatment planning. Of course, standardized screening and assessment instruments should be used (CSAT, 2003); Peters and Hills (1997: 10-11) provide an extended listing of some recommended instruments for substance dependence and for mental health. Those researchers we have used and found valuable include, for substance dependence, the ASI (McLellan, Kushner, Metzger, Peters, et al., 1992); for mental health, the Beck Depression Inventory [BDI] (Beck, Steer, and Brown, 1996); the Brief Symptom Inventory [BSI] (Derogatis, 1993); and/or the Symptom Checklist 90 B Revised [SCL-90-R] (Derogatis, 1983).

For in-depth diagnoses, the Diagnostic Interview Schedule [DIS] (Robins, Cottler, Bucholz, and Compton, 1995) and the Structured Clinical Interview for DSM-IV B Patient Version [SCID] (First, Gibbon, Spitzer, and Williams, 1996), but both of these intensive diagnostic instruments require lengthy training even for staff with graduate degrees to learn exactly how to administer and how to score the interviews; also, an interview typically takes one to two hours to administer, and longer to score.

Osher, Steadman and Barr (2002) point out that, in addition to using appropriate instruments, it is important to gather information from other relevant sources (law enforcement, the court, family members) and to engage the offender in assessing his or her own needs. Any special circumstances (gender, age, language skills and comprehension, etc.) must be taken into account in the assessment.

Because symptoms typically change over time, often improving due to treatment, sometimes worsening due to stressors or other factors, assessment should be repeated several times during the course of treatment (Peters and Hills, 1997: 25). A full description of the screening and assessment process and the available instruments (not specifically for offenders with COD, but which could be adapted) are found in the recent TIP for COD (CSAT, 2003).

Individualized Treatment Plan

“One size fits all” approaches to treatment of COD offenders simply will not work. Rather, “orientations and treatment activities should be flexibly designed for different diagnostic groups, individuals with different cognitive abilities; and different level of motivation for treatment” (Peters and Hills, 1997: 25). Again, the offender

must be encouraged to participate in assessing his or her own needs and in developing his or her own treatment plan. It is especially valuable to consider the offender's input regarding past experiences with mental health or substance abuse treatment in terms of what worked and what didn't (Osher, Steadman, and Barr, 2002).

Pharmacological Treatment

Research has shown that treatment with particular medications is helpful for specific diagnoses of mental illness in particular individual circumstances (U.S. Department of Health and Human Services, 1999; see also National Institute on Drug Abuse, 1999). For example, pharmacological advances over the past decade have produced antipsychotic and other medications with greater effectiveness and fewer side effects (CSAT, 2003). It is generally helpful for mental health clinicians to obtain information about COD clients from the clients' substance abuse treatment counselors as well, in order to design effective treatment for both types of disorders. When desirable medication regimens are prescribed, careful monitoring should be used to ensure that medication compliance is maintained (Osher, Steadman, and Barr, 2002).

Integration of Treatment

Integrated treatment refers broadly to any mechanism by which treatment interventions for COD are combined within the context of a primary treatment relationship or service setting...As such, integrated treatment reflects the longstanding concern within drug abuse programs for treating the whole person and recognizes the importance of ensuring that entry into any one system can provide access to all needed systems: in short, that clients face "no wrong door" in accessing treatment and services. (CSAT, 2003; Executive Summary)

Within offender populations the concept of integrated treatment should also include interventions that address criminal thinking, such as the cognitive-behavioral approaches designed for this purpose.

Experience within the mental health system has led to treatment models that integrate substance use services (CSAT 1994; Drake and Mueser 1996; Lehman and Dixon 1995; Minkoff and Drake 1991; Zimberg 1993). In 1998, Drake and colleagues reviewed research emanating from studies conducted within mental health centers, concluding that comprehensive, integrated treatment, "especially when delivered for 18 months or

longer, resulted in significant reductions of substance abuse and, in some cases, in substantial rates of remission, as well as reductions in hospital use and/or improvements in other outcomes" (Drake et al. 1998, p. 601). Similarly, studies within substance abuse treatment centers found that the integration of mental health services onsite improved both retention and outcome (Charney et al. 2001; McLellan et al. 1993; Saxon and Calsyn 1995; Weisner et al. 2001). The modified TC has demonstrated effectiveness among homeless clients with COD (De Leon, Sacks, Staines, and McKendrick, 2000). It is now recognized that treatment services for COD must be comprehensive (capable of responding to multiple issues), integrated (combining substance abuse and mental health treatment), and continuous (graduating through levels of care) (CSAT, 2003). These integrative models can be adapted for use within the criminal justice system.

Phases of Treatment

Many clinicians view clients as progressing through phases (Drake and Mueser 1996; McHugo et al. 1995; Osher and Kofoed 1989; Sacks et al. 1998). Generally, three to four phases are identified, including engagement, stabilization, treatment, and continuing care (aftercare). Psychoeducational approaches are common and clinically useful in the early stages of treatment to help individuals understand both their mental health disorder and substance abuse (Peters and Hills, 1997: 25). The middle phases should focus on mental health and substance abuse treatment, and on changes in criminal thinking and behavior and other problematic behavior patterns. Later phases emphasize community re-entry; the transition from treatment in prison to treatment in the community is especially important. Two crucial tasks are (1) to "identify required community and correctional programs responsible for post-release services" and (2) to "coordinate the transition plan to ensure implementation and avoid gaps in care" (Osher, Steadman, and Barr, 2002: 13-15).

Continuity of Care

Because both mental and substance use disorders tend to be chronic, and because recidivism likewise tends to recur, rehabilitation and recovery for offenders with COD is expected to take months, if not years. As clients move across different service systems, coordination (e.g., Morrissey et al. 1997) is needed to provide coherent care over time. This continuity is essential for the COD offender population, which is particularly susceptible to symptom recurrence, sub-

stance abuse relapse, and criminal recidivism.

Studies of criminal justice populations provide evidence of the benefits of continuity of care for those offenders not specifically identified as having COD. For example, at 3 years post-treatment, only 27 percent of those prison program completers who also completed an aftercare program were returned to custody, while three-fourths of the subjects in all other study groups were returned (Wexler et al., 1999); similar findings were reported by Knight and colleagues (1999) and by Inciardi et al. (1997). Although these studies are subject to selection bias for entry into aftercare, the long-term outcomes suggest support for the use of aftercare as an essential element in sustaining positive treatment effects over time.

Examples of Programming

Over the past decade, interventions have been implemented to improve COD services delivered to offenders, and several programs for offenders with COD have been developed, most having some features in accord with the principles of effective treatment discussed above. This section provides examples of programming currently in place; however, research is needed to evaluate both the principles and the programs.

Diversion Approaches

Diversion programs can play a role before an offender is sent to jail to await trial (pre-booking diversion), while in jail awaiting trial, or while in jail awaiting sentencing.

Pre-Booking Programs

Pre-booking programs typically involved partnerships between the police and mental health professionals to deal with individuals who appear to have committed less serious offenses (e.g., misdemeanors) as a result of psychiatric problems (and who do not pose a risk of violence) by diverting them to mental health treatment instead of charging these offenders and having them await trial (Lamb, Shaner, Elliot et al., 1995). The other diversion programs summarized here are post-booking programs.

Mental Health Courts

In Mental Health Courts, the judge (as well as making the standard "judicial" decisions) typically takes a more active role than usual in the

early stages of case processing. Although some mental health courts have a general caseload, most participants in the San Bernadino Mental Health Court have COD. This program admits defendants charged with nonviolent lower-level felonies, punishable by up to 6 years in prison, and defendants charged with misdemeanors for whom a jail term is otherwise likely. Clinical staff conduct interviews and screening, using a two- to three-week period to collect background information and to stabilize the client on medication. Upon admission, the offender is placed on probation, contingent upon compliance with an individualized treatment contract. Most participants are released into a board-and-care residential treatment facility. Case managers visit each client several times a week to ensure adherence to the treatment contract and delivery of appropriate treatment. Clients participate in a wide array of residential services, including group therapy, anger management, socialization skills, psychotherapy, medication therapy, chemical dependency treatment, budgeting skill training, and drug testing (Bureau of Justice Assistance, 2000: Chapter 5).

Jail Diversion Programs

In these programs the judge retains his or her standard role while another party plays a more active role in the screening and processing of potentially eligible psychiatric cases. For example, the District Attorney's office may take on the screening work. The Kings County (Brooklyn, New York) *Treatment Alternatives for Dually Diagnosed Defendants* (TADD) identifies potential eligible offenders (by the nature of the charges, referrals from mental health or substance abuse treatment providers, etc.) for clinical assessment to determine whether the criteria of COD (diagnosis of both a DSM IV Axis I mental disorder and a substance abuse disorder) are met. The District Attorney's Office determines the plea offer for those who are eligible: if accepted in court, this leads to admission into TADD. Felons (62 percent of the participants) are placed in treatment for 16-24 months, while those with misdemeanor charges enter treatment for shorter terms. As reported this year, 47 percent of those entering TADD go directly into residential treatment, 22 percent are referred to outpatient facilities, 6 percent are placed in crisis beds pending residential treatment, and the remainder are referred to other forms of treatment. Successful TADD completion results in withdrawal of the guilty plea and the charges are dismissed; if the offender is unsuccessful, he or she is sentenced in accordance with the plea offer (District Attorney's Office Kings County NY, 2003).

Jail or Prison Approaches

After reviewing seven dual diagnosis treatment programs in state and federal prisons for inmates with COD, Edens, Peters, and Hills (1997: 439) state in summary that

Key program components include an extended assessment period, orientation/motivational activities, psychoeducational groups, and cognitive behavioral interventions, such as restructuring of "criminal thinking errors," self-help groups, medication monitoring, relapse prevention, and transition into institution or community-based aftercare facilities. Many programs use therapeutic community approaches that are modified to provide (a) greater individual counseling and support, (b) less confrontation, (c) smaller staff caseloads, and (d) cross training of staff. Research is underway in 3 of the 7 sites to examine the effectiveness of these new programs.

The Clackamas County Program (Oregon City, OR)

This program begins with pretreatment services for inmates with COD that explore psychoeducational and preliminary treatment issues, and that are provided by a substance abuse treatment counselor and a corrections counselor who is certified to provide substance abuse treatment services. On release, many of these inmates transfer to the *Corrections Substance Abuse Program*, a residential treatment program in a work release setting. On successful completion of the program, clients move to outpatient care in the community with continued monitoring by probation or parole.

The highest incidence of personality disorders among Clackamas County substance abuse treatment programs is found among offenders under electronic surveillance. A program for this difficult group relies on building skills to address such mental health issues as criminal thinking errors, anger management, and conflict resolution. *Bridges* is a specific subset within this program explicitly for clients who have COD, which provides both case management and treatment services. Since treatment for most of these clients is complicated by their severe and persistent mental illness and their history of failure in school and work, *Bridges* is intensive, step-wise, and structured, providing support and opportunity for clients to develop social and work skills (CSAT, 2003).

The Colorado Modified TC

Personal Reflections is a program for inmates with mental illness housed in a separate unit at

the San Carlos Correctional Facility in Colorado. Therapeutic community (TC) principles and methods provide the foundation for recovery and the structure for the program of substance abuse and mental health treatment, and for a cognitive-behavioral curriculum focused on criminal thinking and activity. A positive peer culture facilitates behavior change, while psychoeducational classes increase the inmate's understanding of mental illness, addiction, the nature of COD, drugs of use and abuse, and the connection between thoughts and behavior. These classes also teach emotional and behavioral coping skills. Those who complete the prison program are eligible for a TC program in community corrections on release (see Sacks and Sacks, 2003 for a full description of the program).

Programming for Women Offenders

The WINGS Program at Riker's Island jail (New York City) provides voluntary substance abuse, mental health, and medical treatment services to women. The program includes group counseling, parenting skills classes, case management, and discharge planning (Barnhill, 2002). *TAMAR's Children* (Maryland) is designed for pregnant and post-partum women (with their infants) who are in state and local detention facilities. The program objective is to foster mother-infant attachments and to integrate the delivery of mental health services, substance abuse treatment, and trauma treatment (Barnhill, 2002).

Research on Outcomes

This section reviews the emerging findings on outcomes of treatment for offenders with COD. Since relatively few studies have been published as yet, the outline of approaches from the preceding section is followed only roughly, and other outcome studies (e.g., Jail Case Management) have been included.

Jail diversion programs

In 1999, Steadman et al. found only three published reports on the effectiveness of jail diversion programs for those with COD. The first (Lamb, Shaner, Elliot et al., 1995) assessed a prebooking diversion program that teamed police officers and mental health professionals; the former provided transportation and skills in handling violence, while the latter contributed expertise in mental illness diagnoses and in dealing with psychiatric patients. The team made decisions for disposition of psychiatric crisis cases in the community, including those with a threat of violence or

actual violence. In a six-month follow-up of the 224 cases under study, most of the troubled individuals were sent to hospitals for examination; only two were sent to jail. Similarly, a second study (Borum, Deane, Steadman et al., 1998) examined pre-booking programs that showed promise in diverting those with mental disorders from jail while facilitating access to treatment. On average, only 6.7 percent of the "mental disturbance" calls resulted in arrest. The third study (Lamb, Weinberger, and Reston-Parham, 1995) reported on a post-booking program that provided mental health consultation to a municipal court. One-year follow-up data suggested that those who participated in the program had, on average, better outcomes than those who did not participate. Steadman, et al. (1999) point out that, although these three research studies do provide useful information, the research methods employed were not rigorous enough to determine that the interventions were responsible for the observed outcomes.

A Multnomah County (Oregon) diversion program provides intervention treatment for offenders who are in psychiatric crisis, many of whom have significant alcohol and drug problems. A study (Gratton, 2001) comparing 73 offenders who were diverted to treatment to 133 who were sentenced to jail found that the jail group had lower re-arrest rates and better living situations at follow-up. The diversion group was using drugs more often than the jail group at the 3-month but not at the 12-month follow-up, possibly because of continued substance abuse treatment. The diversion group did report significantly higher mental health functioning after a year, suggesting the advantage of mental health services.

Prison programs

Edens, Peters, and Hills (1997) describe the *Estelle Unit* in the Substance Abuse Felony Punishment Facility that contains mainly COD inmates in a modified TC operated by the Gateway Foundation for the Texas Department of Criminal Justice. Over a period of 9-12 months, at least 20 hours per week of treatment and education services are provided, including counseling for chemical dependency and relapse prevention. The authors cite Von Sternberg's (1997) unpublished report indicating high rates of retention in treatment, and lower rates of crime and drug use for graduates of the program, relative to a comparison group.

Van Stelle and Moberg (2000) conducted an outcome evaluation of the *Mental Illness-Chemical Abuse* (MICA) Program at Oshkosh Correctional Institution (Wisconsin), which included a comparison group of offenders who met MICA eligibility criteria, but who did not have enough time remaining on their sentences to participate in the experimental program. Logistic regression analyses revealed that MICA partici-

pants (both completers and dropouts) were more likely than those in the comparison group to be medication compliant, abstinent from substance use, and more stable at three months after release. These results suggest that medication compliance and resulting mental health stability may be associated with abstinence from substance use and perhaps to a decreased likelihood of recidivism. The authors note that only a small sample was available at the time of the evaluation, which qualifies the longer-term outcomes as preliminary.

In a study of the Colorado modified TC described above, Sacks and colleagues (2003) randomly assigned inmates with COD to either Modified TC or Mental Health treatment. Upon completion of prison treatment and release to the community, the Modified TC subjects could elect to enter an aftercare TC, while those in the Mental Health group were eligible to receive a variety of services in the community. The findings show an advantage for Modified TC treatment on measures of criminal behavior, particularly when prison and aftercare TC treatment are combined, as reincarceration at 12 months post-prison release for this group (5%) was significantly lower ($p < .02$) than for the Mental Health group (33%). These results support the principles of integrated treatment and continuity of care.

Jail Case Management

Godley et al. (2000) assessed a demonstration case management program for jailed individuals with COD. Program admissions were sentenced to probation, avoiding further time in jail, provided that they maintained compliance with the program. Case management services included screening, substance abuse treatment placement, progress monitoring for the court, graduated sanctions to increase treatment engagement, facilitated involvement of significant others, and referrals to various other support services. Of the 54 clients enrolled, six-month follow-up data were obtained for 41 participants, and showed statistically significant reductions in legal problems and improvements in symptoms.

Future Directions and Recommendations

Treatment

1. Follow the five principles of treatment of clients discussed earlier (screening and assessment, individual treatment plans, integrated treatment, a phased approach, continuity of care), as well as the essential components of treatment for COD offenders (e.g., psychiatrically enhanced staffing, psychoeducational classes,

criminal thinking and behavior interventions) described in the COD TIP (CSAT, 2003).

2. Extend the range of treatment available to offenders with COD. The modified TC is a promising approach (Sacks and Sacks, 2003; Sacks et al., 2003), while several other substance abuse methods translate effectively to the treatment of COD, e.g., motivational interviewing (Carey et al., 2001), cognitive behavioral approaches (Peters and Hills, 1997), contingency management, (Petry, 2000; Petry et al., 2001) and relapse prevention strategies (Roberts et al., 1999).
3. Develop recommendations that will improve continuity of care; potential methods include the Modified TC, Assertive Community Treatment, and Intensive Case Management.

Research

1. Conduct a prevalence study of COD in adult offender populations that will examine the combined mental and substance abuse disorders, and delineate subgroups and age ranges, using sound procedures (clinical interview, record review, or standardized assessment instrument). This research will clarify the type and severity of COD in the offender population to inform policy and planning.
2. Survey services, staffing, resources, organizational characteristics, and integration of substance abuse and mental health treatment of existing COD prison programs. This information will inform program design by describing the environment and available resources.
3. Develop, refine, and test treatment approaches and strategies for offenders with COD (a) for in-prison treatment, (b) for successful transition to aftercare to promote continuity of care, and (c) for use of community resources to address the multiple needs of criminal justice clients with COD.
4. Conduct systems and economic analysis to examine (a) to examine barriers both to treatment and to the integration of mental health and substance abuse services, and to elicit specific issues that generate public opposition, and (b) to study the costs of treatment and the benefits relative to costs.

Conclusion

Prevalence of COD in offender populations is high, and shows indications of being on the rise. Treatment principles that guide COD programming are now available, along with a variety of emerging program models and strategies, some of which show promising research results in terms of effectiveness. Additional program development, accompanied by rigorous evaluation research, is needed. The recently formed *Criminal Justice Drug Abuse Treatment Network* (National Institute on Drug Abuse, 2002) calls for an alliance among research, practice, and criminal justice to advance programs and research for substance abusing offenders. This initiative is particularly important to the COD offender population, which experiences unique difficulties and barriers to treatment, especially upon discharge from prison. A coordinated effort of practitioners, treatment providers, and criminal justice professionals is necessary to advance COD treatment for offenders while assuring that both public health and public safety concerns are met.

References

- Barnhill, S. (2002). *Residential and institutional services: Visitation and cohabitation strategies*. Delmar, NY: National GAINS Center.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *BDI-II Manual: Beck Depression Inventory*. San Antonio, TX: The Psychological Corporation.
- Borum, R., Deane, M. W., Steadman, H., & et al. (1998). Police perspectives on responding to mentally ill people in crisis. *Behavioral Sciences and the Law*, 16, 393-405.
- Bureau of Justice Assistance. (2000). *Emerging Judicial Strategies for the Mentally Ill in the Criminal Caseload*. Washington, DC: Bureau of Justice Assistance.
- Canales-Portalatin, D. (1995). Comorbidity of mental illness and substance use in jail populations. *Journal of Offender Rehabilitation*, 22(1/2), 59-76.
- Carey, K. B., Purnine, D. M., Maisto, S. A., & Carey, M. P. (2001). Enhancing readiness-to-change substance abuse in persons with schizophrenia: A four-session motivation-based intervention. *Behavior Modification*, 25(3), 331-384.
- Center for Substance Abuse Treatment. (1994). *Assessment and treatment of patients with co-existing mental illness and alcohol and other drug abuse. Treatment Improvement Protocol (TIP) Series, Number 9*. DHHS Pub. No. (SMA) 95-3061. Rockville, MD: Center for Substance Abuse Treatment.
- Center for Substance Abuse Treatment. (2003). *Substance Abuse Treatment for Persons with Co-Occurring Disorders. Treatment Improvement Protocol (TIP) Series, Number ___*. S. Sacks, Chair & R. Reis, Co-Chair, Consensus Panel. DHHS Pub. No. (SMA) ___-___. Rockville, MD: Substance Abuse and Mental Health Services Administration (in press).
- Charney, D. A., Paraherakis, A. M., & Gill, K. J. (2001). Integrated treatment of comorbid depression and substance use disorders. *Journal of Clinical Psychiatry*, 62(9), 672-677.
- Crome, I. B. (1999). Substance misuse and psychiatric comorbidity: Towards improved service provision. *Drugs: Education, Prevention & Policy*, 6(2), 151-174.
- Davis, W. N. (2003). Special Problems for Specialty Courts. *American Bar Association Journal*, 89, 32-37.
- De Leon, G., Sacks, S., Staines, G., & McKendrick, K. (2000). Modified therapeutic community for homeless MICAs: Treatment Outcomes. *Journal of Substance Abuse*, 26(3), 461-480.
- Denckla, D., & Berman, G. (2001). *Rethinking the Revolving Door: A Look at Mental Illness in the Courts*. Center for Court Innovation, United States.
- Derogatis LR. (1983). *SCL-90-R: Administration, Scoring & Procedures Manual—II for the R(vised) Version and Other Instruments of the Psychopathology Rating Scale Series*. Towson, MD: Clinical Psychometric Research.
- Derogatis, L. R. (1993). *BSI Brief Symptom Inventory Administration, Scoring, and Procedures Manual*. Minneapolis, MN: National Computer Systems, Inc.
- District Attorney's Office Kings County NY. (2003) *Treatment Alternatives for Dually Diagnosed Defendants (TADD)* [Web Page]. URL <http://www.brooklynda.org/DTAP/TADD.htm> [2003, May 27].
- Ditton, P. M. (1999) *Mental health and treatment of inmates and probationers*. Washington, DC: Bureau of Justice Statistics [Web Page]. URL <http://www.ojp.usdoj.gov/bjs/pub/asci/mhtip.txt>.
- Draine, J., & Solomon, P. (1999). Describing and evaluating jail diversion services for persons with serious mental illness. *Psychiatric Services*, 50(1), 56-61.
- Drake, R. E., & Mueser, K. T. (1996). *Dual Diagnosis of Major Mental Illness and Substance Abuse Disorder II: Recent Research and Clinical Implications. New Directions for Mental Health Services*. San Francisco, CA: Jossey-Bass, Inc.
- Drake, R. E., Mercer-McFadden, C., Mueser, K. T., McHugo, G. J., & Bond, G. R. (1998). Review of integrated mental health and substance abuse treatment for patients with dual disorders. *Schizophrenia Bulletin*, 24(4), 589-608.
- Edens, J. F., Peters, R. H., & Hills, H. A. (1997). Treating prison inmates with co-occurring disorders: An integrative review of existing programs. *Behavioral Sciences and the Law*, 15(4), 439-457.
- First, M. B., Gibbon, M., Spitzer, R. L., & Williams, J. B. W. (1996). *User's Guide for the Structured Clinical Interview for DSM-IV Axis I Disorders - Research Version (SCID-I, Version 2.0)*. New York: Biometrics Research Department, New York State Psychiatric Institute, 722 W 168th Street, New York 10032.
- Godley, S. H., Finch, M., Dougan, L., McDonnell, M., McDermeit, M., & Carey, A. (2000). Case management for dually diagnosed individuals involved in the criminal justice system. *Journal of Substance Abuse Treatment*, 18(2), 137-148.
- Gratton, J. (2001). Jail diversion for persons with co-occurring disorders. *Criminal Justice Abstracts*.
- Hendrie, H. C., Ogunniyi, A., Hall, K. S., Baiyewu, O., Unverzagt, F. W., Gureje, O., Gao, S., Evans, R. M., Ogunseyinde, A. O., Adeyinka, A. O., Musick, B., & Hui, S. L. (2001). Incidence of dementia and Alzheimer disease in 2 Communities: Yoruba residing in Ibadan, Nigeria, and

- African Americans residing in Indianapolis, Indiana. *Journal of the American Medical Association*, 285(6), 739-747.
- Inciardi, J. A., Martin, S. S., Butzin, C. A., Hooper, R. M., & Harrison, L. D. (1997). An effective model of prison-based treatment for drug-involved. *Journal of Drug Issues*, 27(2), 261-278.
- Kleinsasser L. D., & Michaud, J. T. (2002). Identifying and tracking seriously mentally ill offenders in the Colorado Department of Corrections. *Presentation to the Mental Health in Corrections Consortium*.
- Knight, K., Simpson, D. D., & Hiller, M. L. (1999). Three-year reincarceration outcomes for in-prison therapeutic community treatment in Texas. *The Prison Journal*, 79(3), 337-351.
- Lamb, R. H., Shaner, R., Elliot, D. M., & et al. (1995). Outcome for psychiatric emergency patients seen by an outreach police-mental health team. *Psychiatric Services*, 46, 1267-1271.
- Lamb, R. H., Weinberger, L. E., & Reston-Parham, C. (1995). Court intervention to address the mental health needs of mentally ill offenders. *Psychiatric Services*, 47, 275-281.
- Lehman, A. F., & Dixon, L. B. (1995). *Double Jeopardy: Chronic Mental Illness and Substance Use Disorders*. Chur, Switzerland: Harwood Academic Publishers.
- McHugo, G. J., Drake, R. E., Burton, H. L., & Ackerson, T. H. (1995). A scale for assessing the stage of substance abuse treatment in persons with severe mental illness. *Journal of Nervous & Mental Disease*, 183, 762-767.
- McLellan, A. T., Arndt, I. O., Metzger, D. S., Woody, G. E., & O'Brien, C. P. (1993). The effects of psychosocial services in substance abuse treatment. *Journal of the American Medical Association*, 269(15), 1953-1959.
- McLellan, A. T., Kushner, H., Metzger, D., Peters, F., & et al. (1992). The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment*, 9, 199-213.
- Menezes, P. R., Johnson, S., Thornicroft, G., Marshall, J., Prosser, D., Bebbington, P., & Kuipers, E. (1996). Drug and alcohol problems among individuals with severe mental illness in south London. *British Journal of Psychiatry*, 168(5), 612-619.
- Merriam-Webster. (2003) *Medical Dictionary* [Web Page]. URL <http://www2.merriam-webster.com/cgi-bin/mwmednlm> [2003, June 6].
- Minkoff, K., & Drake, R. (1991). *Dual Diagnosis of Major Mental Illness and Substance Disorder*. San Francisco: Jossey-Bass.
- Morrissey, J., Calloway, M., Johnsen, M., & Ullman, M. (1997). Service system performance and integration: A baseline profile of the ACCESS demonstration sites. Access to community care and effective services and supports. *Psychiatric Services*, 48(3), 374-380.
- National Association of State Mental Health Program Directors and National Association of State Alcohol and Drug Abuse Directors. (1999). *National Dialogue on Co-Occurring Mental Health and Substance Abuse Disorders*. Washington, DC: National Association of State Alcohol and Drug Abuse Directors, http://www.nasadad.org/Departments/Research/ConsensusFramework/national_dialogue_on.htm [Accessed December 27, 2000].
- National Institute of Mental Health. (2002) *NEWS RELEASE: Psychiatric disorders common among detained youth* [Web Page]. URL <http://www.nimh.nih.gov/events/prjuvenile.cfm> [2003, March 18].
- National Institute on Drug Abuse. (1999) *Principles of Drug Addiction Treatment* [Web Page]. URL <http://165.112.78.61/PODAT1.html> [2002, June 20].
- National Institute on Drug Abuse. (2002). *National Criminal Justice Drug Abuse Treatment Services Research System*. RFA-DA-02-011. National Institutes on Health, Bethesda, MD. <http://grants.nih.gov/grants/guide/rfa-files/RFA-DA-02-011.html> [Accessed 02/04/02].
- National Institute on Justice. (2000). *At-A-Glance: Recent Research Findings*. Rockville, MD:
- Osher, F. C., & Kofoed, L. L. (1989). Treatment of patients with psychiatric and psychoactive substance abuse disorders. *Hospital and Community Psychiatry*, 40(10), 1025-1030.
- Osher, F., Steadman, H. J., & Barr, H. (2002). *A Best Practice Approach to Community Re-entry from Jails for Inmates with Co-occurring Disorders: The APIC Model*. Delmar, NY: The National GAINS Center.
- Peters, R. H., & Hills, H. A. (1997). *Intervention Strategies for Offenders with Co-Occurring Disorders: What Works?* Delmar, NY: National GAINS Center.
- Petry, N. M. (2000). A comprehensive guide to the application of contingency management procedures in clinical settings. *Drug and Alcohol Dependence*, 58, 21-22.
- Petry, N. M., Petrakis, I., Trevisan, L., Wiredu, G., Boutros, N. N., Martin, B., & Kosten, T. R. (2001). Contingency management interventions: From research to practice. *American Journal of Psychiatry*, 158(5), 1-9.
- Powell, T. A., Holt, J. C., & Fondacaro, K. M. (1997). The prevalence of mental illness among inmates in a rural state. *Law and Human Behavior*, 21(4), 427-438.
- Roberts, L. J., Shaner, A., & Eckman, T. A. (1999). *Overcoming addictions: Skills training for people with schizophrenia*. New York: W.W. Norton & Co.
- Robins, L., Cottler, L., Bucholz, K., & Compton, W. (1995). *Diagnostic Interview Schedule for DSM-IV (DIS-IV)*. Rockville, MD: National Institute on Mental Health (NIMH).
- Sacks, S., & Sacks, J. Y. (2003). Modified TC for MICA Inmates in Correctional Settings: A Program Description. *Corrections Today* (in press).
- Sacks, S., De Leon, G., Bernhardt, A. I., & Sacks, J. Y. (1998). *Modified Therapeutic Community for Homeless Mentally Ill Chemical Abusers: Treatment Manual*. New York: National Development & Research Institutes, Inc.
- Sacks, S., Sacks, J. Y., McKendrick K., & Banks, S. (2003). Modified TC for MICA Offenders: Crime Outcomes. *Manuscript Submitted for Publication*.
- Sacks, S., Sacks, J., De Leon, G., Bernhardt, A. I., & Staines, G. L. (1997). Modified therapeutic community for mentally ill chemical "abusers": Background; influences; program description; preliminary find-

- ings. *Substance Use and Misuse*, 32(9), 1217-1259.
- Saxon, A. J., & Calsyn, D. A. (1995). Effects of psychiatric care for dual diagnosis patients treated in a drug dependence clinic. *American Journal of Drug and Alcohol Abuse*, 21(3), 303-313.
- Steadman, H. J., Deane, M. W., Morissey, J. P., Westcott, M. L., Salasin, & Shapiro, S. (1999). A SAMHSA research initiative assessing the effectiveness of jail diversion programs for mentally ill persons. *Psychiatric Services*, 50(12), 1620-1623.
- U. S. Department of Health & Human Services. (1999). *Mental Health: A Report of the Surgeon General*. U. S. Department of Health and Human Services (p. Chapter 2). Rockville, MD: U. S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institute of Mental Health.
- Van Stelle, K. R., & Moberg, D. P. (2000). Outcome evaluation of the Wisconsin Residential Substance Abuse Treatment Program: The Mental Illness - Chemical Abuse (MICA) Program at Oshkosh Correctional Institution 1998 - 2000. *Criminal Justice Abstracts*.
- Von Sternberg, K. (1997). *Project Check-in Summary Report*. Houston, TX: Change Assessment Research Project: University of Houston .
- Weisner, C., Mertens, J., Parthasarathy, S., Moore, C., & Lu, Y. (2001). Integrating primary medical care with addiction treatment. *Journal of the American Medical Association*, 286(14), 1715-1721.
- Wexler, H. K., Lowe, L., Melnick, G., & Peters, J. (1999). Three-year reincarceration Outcomes for Amity In-Prison and after-care therapeutic community and aftercare in California. *The Prison Journal*, 79(3), 321-336.
- Zimberg, S. (1993). Introduction and general concepts of dual diagnosis. In J. Solomon, S. Zomberg, & E. Shollar (eds), *Dual Diagnosis: Evaluation, treatment, training, and program development* (pp. 3-21). New York: Plenum Medical Book Co.

Amenability to Treatment of Drug Offenders

Douglas B. Marlowe, J.D., Ph.D.

Treatment Research Institute and University of Pennsylvania

Nicholas S. Patapis, Psy.D., M.A.C.J.

Treatment Research Institute and University of Pennsylvania

David S. DeMatteo, J.D., Ph.D.

Treatment Research Institute

THE “WAR ON DRUGS” that began in the 1980s contributed to an unprecedented expansion in the U.S. inmate population. Prison and jail admissions more than tripled in the ensuing years (Harrison & Karberg, 2003), with drug violations accounting for approximately 60 percent of the increase in the federal inmate population and one-third of the increase in the state inmate population (Belenko & Peugh, 1998; Harrison & Beck, 2002). As of 2001, drug offenders comprised more than half (57 percent) of federal prison inmates and over 20 percent of state prison inmates in this country (Harrison & Beck, 2002).

Reliance on imprisonment has done little to stem the tide of crime and illicit drug use. Over two-thirds (68 percent) of offenders, including drug offenders, are arrested for a new crime within three years of their release from prison, nearly one-half (47 percent) are convicted of a new crime, and over one-half (52 percent) are reincarcerated either for a new crime or for a technical violation (Langan & Levin, 2002). Moreover, in some studies, approximately 85 percent of drug-abusing offenders returned to drug use within one year of release from prison and 95 percent returned to drug use within three years (e.g., Marlowe, 2002; Martin, Butzin, Saum, & Inciardi, 1999).

Prison over-crowding has led to court-imposed caps on inmate populations in several states and is producing spiraling costs related to the expansion of correctional facilities. Partly as a result of this, various initiatives have been

devised to provide community-based supervision and treatment to drug offenders in lieu of criminal prosecution or incarceration. These range in intensity from true diversion programs, to standard and intensive probation programs, to judicially supervised programs such as drug courts. True diversion programs – sometimes called “probation without verdict” – have traditionally permitted low-level misdemeanor or summary offenders to have their charges dropped and their arrest record expunged contingent upon completion of a prescribed regimen of supervised probation and drug treatment. Record expungement permits the individual to respond, truthfully, on an employment application or similar document that he or she has not been arrested for a drug-related offense. Pre-plea drug courts commonly include a diversionary component as well, in which graduates can have their charges dropped upon completion of the program and can have their arrest record expunged after remaining arrest-free for an additional legally-prescribed waiting period.

A few states, including Arizona, California, the District of Columbia, and Hawaii, recently enacted laws expanding eligibility for a probation-without-verdict model of diversion to all nonviolent drug-possession offenders who are not currently charged with another felony or serious misdemeanor offense and who have not previously been convicted of or incarcerated for such an offense within a specified time period. These statutes generally provide drug-possession

offenders with multiple chances to succeed at diversion. Pursuant to California’s Proposition 36 (California Substance Abuse and Crime Prevention Act of 2000), for example, if an offender violates a drug-related condition of probation or commits a new drug-possession offense, the State can only revoke probation if it can prove by a preponderance of the evidence that the offender is a “danger to the safety of others.” For a second drug-related violation of probation, the State must prove that the offender is either a danger to the safety of others or is “unamenable to drug treatment” to accomplish a revocation (e.g., *In re Mehdizadeh*, 2003).

Implicit in any initiative that provides drug treatment in lieu of incarceration is that eligible offenders are reasonably likely to benefit from available drug treatment interventions. In the case of California’s Proposition 36, this construct of “amenability to treatment” is explicitly referenced in the criminal statute. In other contexts, it is simply a logical prerequisite for the initiative. There can be no rational justification for placing drug offenders in treatment if they do not require treatment, do not want treatment, or are unable to make use of existing interventions.

On its face, amenability to treatment would seem to be a clinical issue to be determined by drug treatment providers in the course of their professional work with clients. Who better to decide whether a particular offender is amenable to treatment than a trained practitioner with expertise in assessing motivation

and prognosis for change? Many terms, however, do not retain their common-language definition when they are incorporated into a statute or interpreted by the courts. Words may lose their colloquial meaning and take on a technical legal definition that reflects a sum total of public-policy considerations. Policy concerns set the maximum limits on what types of drug offenders can be considered potentially amenable to treatment and what types of drug treatment services should reasonably be available to these individuals. Within those policy-imposed constraints, however, there is room for clinical judgment in rendering amenability-to-treatment decisions. The drug abuse treatment literature provides some guidance in making these assessments; however, further research is needed to improve upon their accuracy and reliability. This article reviews the legal and clinical factors that should be considered in making amenability-to-treatment determinations.

Criminal History

Amenability to treatment is inextricably linked in the minds of policymakers with offenders' criminal history. Virtually any program that provides drug treatment in lieu of incarceration excludes offenders with violent, serious, or recidivist criminal records. Proposition 36, for instance, excludes drug-possession offenders charged with a concurrent felony or serious misdemeanor offense, as well as those previously convicted of or incarcerated for such an offense within the previous five years. Similarly, as a condition of receiving federal funding, drug courts cannot treat violent offenders, defined as those who have been charged with or convicted of an offense involving the use of a weapon, death or serious injury to a victim, or force against another person (Violent Crime Control and Law Enforcement Act of 1994).

Courts invariably uphold these exclusionary criteria on the ground that the legislature could reasonably have concluded that serious or recidivist offenders are un-amenable to treatment *as a matter of law*. For instance, California appellate courts have routinely upheld Proposition 36's stringent requirement that eligible offenders be free of felony or serious misdemeanor charges for the immediately preceding consecutive five years on the ground that excluded offenders could reasonably be considered, as a matter of public policy, to be un-amenable to treatment (*People v. Lee*, 2002; *People v. Superior Court of San Bernardino County*, 2002; *People v. Superior Court of Santa Clara County*, 2002). California courts

have upheld on similar grounds the exclusion of offenders with concurrent misdemeanor charges, even if the disqualifying charges were closely related to the principal charge of drug possession or drug intoxication—for example, driving under the influence (*People v. Campbell*, 2003) or cultivating marijuana for personal use (*People v. Phelps*, 2003). Because criminal offenders have no implicit right to be diverted from incarceration, the public and policymakers are free to draw bright-line rules based upon an intuitive sense of what they perceive as fair and in the best interests of public safety (e.g., *People v. Superior Court of Napa County*, 2002).

The Supreme Court of the United States weighed in several decades ago in favor of such hard-line exclusions. The Narcotic Addict Rehabilitation Act (NARA, 1966)—which has since been repealed—once provided for civil commitment to drug treatment in lieu of incarceration for nonviolent drug-addicted individuals convicted of certain federal offenses, provided they were “likely to be rehabilitated through treatment” and had fewer than two prior felony convictions. The Supreme Court upheld the exclusion of offenders with two or more prior convictions on the ground that Congress could rationally have concluded that such persons would be less amenable to rehabilitation (*Marshall v. United States*, 1974). According to the Supreme Court, excluding recidivist offenders was justified because such individuals might expose the program to exploitation, might present unacceptable risks to society, or might hinder the successful treatment of others.

A number of commentators have criticized treatment-amenability determinations as being mere pretexts for withholding treatment from more culpable offenders (Fraser, 1991; Melton, Petrila, Poythress, & Slobogin, 1997; Slobogin, 1999). According to this argument, the real question is not which offenders are amenable to treatment, but rather which offenders the public and policymakers are amenable to giving a second chance at redemption. As the previous cases illustrate, policy issues do set outer bounds on which offenders may be considered amenable to treatment. And it is true that such across-the-board exclusionary criteria run the risk of being both over-inclusive and under-inclusive. Individuals whose criminal histories were fueled largely by drug use, and who are motivated for treatment, may be denied access to programs because they committed exclusionary offenses. On the other hand, unmotivated offenders may be diverted to treatment based upon the nature of their charges, regardless of their actual prognosis for change. Given that prosecutors' charging practices are often influenced by factors having little

to do with a defendant's actual degree of culpability (e.g., the strength of the evidence, or the effectiveness of defense counsel), offenders may be excluded from diversion programs based upon factors that are wholly unrelated to clinical outcomes.

It is overstated, however, to characterize amenability-to-treatment determinations as pretextual. The fact is that past behavior is the best predictor of future conduct (e.g., Melton et al., 1997; Monahan et al., 2001). Past criminal history is among the best and most robust predictors of future prognosis in correctional programs generally (e.g., Cottle, Lee, & Heilbrun, 2001; Gendreau, Little, & Goggin, 1996; Morgan, 1993; Roundtree, Edwards, & Parker, 1984) and among drug-involved offenders in particular (e.g., Hepburn & Albonetti, 1994). For the most part, psychometric risk-assessment instruments perform little better in predicting criminal recidivism than actuarial projections based predominantly on offenders' past antisocial behavior (e.g., Bonta, 2002). It is defensible, therefore, to consider past criminal conduct in determining whether an offender is likely to be amenable to future rehabilitative efforts.

The problem is that criminal history is an inexact variable. Studies have typically relied on global or summative indexes of criminal history in rendering predictions of recidivism, such as offenders' number of prior arrests, age at first arrest, or age of onset of criminal activity regardless of detection. This does not permit predictions of which specific types of offenses bode the best for drug treatment outcomes. Although it is clear that violent offenders have the poorest prognosis in rehabilitation (Monahan et al., 2001), the evidence is scant in terms of comparing outcomes for drug-abusing individuals charged with drug-possession offenses to, for example, those charged with property offenses, drug-dealing offenses, or vehicular offenses. Data do suggest that the prognosis for future recidivism and for involvement in predatory offenses may be worse if drug abuse and crime emerged together in the offender's history, as opposed to instances in which criminal activity ensued from the need to obtain money for drugs or from the resulting dysfunction of chronic drug use (Farabee, Joshi, & Anglin, 2001). These data do not, however, address offenders' amenability to drug treatment, and they do not focus on specific types of offense categories. Until research uncovers specific criminal-history risk factors for failure in rehabilitation programs, policymakers will continue to rely on their intuitions and on the preferences of their constituencies in selecting exclusionary offenses for criminal-diversion programs.

Previous Failures in Treatment

It is popular among drug-treatment providers and drug abuse researchers to characterize addiction as being a “chronic relapsing condition.” In fact, drug dependence does share many similar characteristics with chronic medical illnesses such as diabetes and hypertension in terms of its genetic heritability, treatment non-compliance rates, and relapse rates (McLellan, Lewis, O’Brien, & Kleber, 2000). A corollary of this position is that multiple treatment episodes are not only acceptable for drug abusers, but expected. Following a chronic-care model, each successive treatment episode is believed to build upon previous efforts in contributing to and maintaining longer-term successful outcomes. This argument has the convenient advantage of making drug treatment impenetrable to criticism. Treatment can never be said to fail; rather, it simply lays the groundwork for future gains that will ultimately be detected.

Correctional authorities and policymakers are, not surprisingly, impatient with this point of view. They are charged with diverting offenders from a criminal career path immediately, and cannot await hypothetical gains that might or might not emerge at some contingent future date. Courts, in particular, have generally not bought the chronic-care argument with regard to drug offenders. If the past is, indeed, prologue to the future, then several courts have reasoned that past negative reactions to treatment are apt to foreshadow future treatment failures (e.g., *Gronquist v. Walter*, 2001). As one court asserted: “It is difficult to conceive of more reliable objective evidence of lack of amenability to treatment and future dangerousness than the fact that, despite being in treatment, the defendant continues to engage in the very criminal behavior for which he or she is being treated” (*State v. McNallie*, 1994, p. 298).

The research evidence is contradictory about whether multiple treatment episodes do, in fact, contribute to longer-term improvements, or whether the lion’s share of improvement should be expected to occur early in a client’s contact with treatment. Some data indicate that multiple past treatment episodes are associated with better outcomes during an index treatment episode in terms of longer lengths of stay in treatment and less post-treatment drug use (Hser, Grella, Chou, & Anglin, 1998; Maddux, Prihoda, & Desmond, 1994; Simpson & Joe, 1993). However, other studies—some conducted by the same investigators—have reported better outcomes for treatment-naïve clients and poorer outcomes for those with extensive treatment histories (Brewer, Catalano, Haggerty, Gainey, & Fleming, 1998; Hser, Grella, Hsieh, Anglin, & Brown, 1999; Hser,

Joshi, Anglin, & Fletcher, 1999; Simpson, Savage, & Joe, 1980). Notably, two studies examining virtually the same data-set came to contradictory conclusions about whether multiple methadone maintenance treatment episodes were associated with reduced criminal recidivism (Merrill, Alterman, Cacciola, & Rutherford, 1999) or with no change in recidivism (Rothbard et al., 1999).

These inconsistencies are not unexpected because virtually all of the studies used single-group, pre/post research designs that analyzed correlates of symptom improvement among subjects. Because many of the studies involved no experimental control and had no suitable comparison conditions, they do not permit scientifically defensible causative inferences to be drawn about the effects of drug treatment services (National Academy of Sciences, 2001). Another problem with the aforementioned research is that it cannot effectively control for the “graying out phenomenon” that commonly occurs among drug abusers and offenders (Blumstein & Cohen, 1987; Moffitt, 1993). Drug use and crime tend to wane naturally as offenders get older. Without an appropriate control condition, improvements resulting from age-effects may be falsely attributed to treatment, because older individuals are more likely to have had multiple treatment episodes by virtue of having had more opportunities for treatment over time.

A recent program of experimentally controlled research lent scientific support to the hypothesis that past treatment failures may be a negative risk factor for future outcomes among drug offenders. More importantly, the results of that research provide guidance about how to potentially manage such offenders more effectively and counteract the negative influences of prior treatment failures. In the first study, misdemeanor drug court clients were randomly assigned either to an intensive level of judicial supervision involving bi-weekly status hearings in drug court, or to a low level of supervision in which they were monitored by treatment personnel and only had status hearings as needed in response to serious infractions. The results revealed that participants who had prior failed experiences in drug abuse treatment provided significantly more drug-positive urine samples and were significantly more likely to be terminated from the drug court program when they were assigned to as-needed hearings; however, such clients performed equivalently or better than most other clients when they were required to attend bi-weekly court hearings (Festinger et al., 2002). This same interaction effect was replicated in two new jurisdictions in rural and urban communities (Marlowe, Festinger, & Lee, 2003; Marlowe, Festinger, & Lee, in press). These results

do suggest that prior treatment failures may be a negative risk factor for the treatment of drug offenders, but more importantly, they point to promising approaches for managing or negating this risk. Rather than excluding offenders with a prior treatment history from diversionary programs, it might be preferable to assign them to a more intensive and closely supervised program such as drug court.

Performance During Treatment

As discussed previously, Proposition 36 provides drug-possession offenders with multiple opportunities to succeed on probation. It essentially erects an irrebuttable presumption that eligible drug offenders are amenable to treatment until they fail three times, at which point they are irrebuttably presumed to be un-amenable to treatment. As characterized by one California appellate court, under Proposition 36 “[a] first time offender is conclusively presumed to be amenable to treatment. A second time offender also is presumed to be amenable to treatment, but that presumption may be rebutted. A third time offender is conclusively presumed to be unamenable to treatment and ineligible for probation” (*People v. Williams*, 2003, p. 702).

It is a simple case to conclude that an offender is un-amenable to treatment if he or she repetitively engages in serious rule violations during treatment, inhibits the participation of other clients, or continually fails to show up for sessions (e.g., *In re Dasinger*, 2002). It is a more difficult matter to interpret a compliant offender’s non-responsiveness to the interventions. As reviewed in the previous section on past treatment failures, the research evidence is ambiguous, at best, about whether non-responsiveness to treatment portends future non-responsiveness. The data suggest that changing an offender’s treatment plan—by, for example, increasing the schedule of court hearings—could counteract the effects of past treatment failures. Proposition 36 and other programs for drug offenders do provide substantial discretion to judges and other criminal justice professionals to increase or alter an offender’s treatment requirements in response to poor performance in treatment. In principle, then, offenders under Proposition 36 should only be determined to be un-amenable to drug treatment after failing to respond to three different treatment regimens.

In reality, however, there is insufficient variability in the types of drug treatment services that are available in this country to permit a meaningful adjustment of many offenders’ treatment plans. Approximately 75 percent to

80 percent of drug treatment programs are outpatient, abstinence-oriented, 12-Step-based programs that deliver services in a group as opposed to individual format (Mulvey, in press; SAMHSA, 2001). In practice, therefore, offenders are typically sent back repeatedly for the same—or more of the same—services that did not work for them before. Waiting for the same treatment regimen to fail three times and then declaring the offender un-amenable to treatment does not comport with logic. If 12-Step groups do not work for an opiate-addicted individual, for example, it is quite conceivable that the same individual could be amenable to methadone maintenance.

Treatment-amenability determinations do not ordinarily consider what services should be available to offenders in an ideal world. The issue is not what services are hypothetically available, but rather what services are immediately and realistically available to this offender at a reasonable cost (e.g., *United States v. Atkins*, 1997). Again, policy considerations set the outer limits on amenability assessments. Clinical issues are relevant, but not dispositive, and are trumped by practical and economic exigencies. As a result, the majority of drug offenders may not be amenable to drug treatment as it is currently conceptualized and delivered. In essence, programs such as drug courts and Proposition 36 give eligible offenders a few chances to respond to a narrow class of readily available services. If they do not respond to those services, they are processed through other criminal justice channels.

Characteristics of the Offender

Certain demographic characteristics have been associated with poorer outcomes in offender rehabilitation programs. These include being younger, male, poor, less intelligent, less educated, having first-degree relatives with drug abuse problems or criminal histories, and being a member of certain racial sub-groups (although the direction of race-effects has been inconsistent across studies) (e.g., Andrews & Bonta, 1998; Gendreau et al., 1996). Not surprisingly, statutes and court opinions steer clear of these demographic variables when considering the relevant risk factors for determining amenability to treatment. It would almost certainly run afoul of due process and equal protection requirements to exclude individuals from correctional rehabilitation programs based upon their immutable demographic characteristics.

Oddly enough, it is unclear in many instances whether offenders must have a serious or diagnosable substance use disorder in order to be eli-

gible for various diversionary initiatives. For example, the introduction to Proposition 36 declares California's intent to provide treatment in lieu of incarceration to "drug-dependent" criminal offenders; however, the substantive provisions of the statute apply to individuals charged with drug-possession offenses, and do not indicate whether those individuals must also have a demonstrable drug-use problem. Similarly, drug courts are intended to treat offenders "with substance abuse problems" (Violent Crime Control and Law Enforcement Act of 1994, § 2201(1)); however, no guidance is provided to indicate how severe the "problem" must be.

Notably, in some studies, nearly one-half of misdemeanor drug court clients (Marlowe, Festinger, Lee, et al., 2003; Marlowe, Festinger, & Lee, 2003), one-third of felony drug court clients (Marlowe et al., in press), and two-thirds of drug-involved felony pre-trial defendants (Lee et al., 2001) produced "sub-threshold" drug abuse composite scores on the Addiction Severity Index (ASI), similar to a community sample of non-substance abusers. This raises the question whether some individuals who are just beginning to experiment with drugs, or who may be non-drug-using dealers, are perhaps being diverted into these programs unnecessarily.

From a prevention perspective, one could argue that it is appropriate to place drug-experimenters into these types of programs as a means of staving off a serious drug problem before it develops. The programs typically involve regular urinalysis monitoring of drug use, consistent sanctions for positive test results, and psycho-education on the negative effects of drugs. This could have the beneficial effect of stopping a developing drug-use habit in its tracks.

A more serious concern is that non-addicted drug dealers could be placed in these programs by virtue of the fact that they were only charged with or convicted of a drug-possession offense, and they may feign a drug-use problem in order to avoid a more serious criminal disposition. It is difficult to detect such instances of faking on self-report instruments like the ASI because the items are self-evident in their focus. The questions ask directly about instances of drug use and can be manipulated convincingly. Some assessment instruments have been developed to detect subtle signs of addiction using questions that are not obvious in their intent. However, those instruments were designed to detect drug-use problems among individuals who are in "denial" or are under-reporting their drug use. They were not designed to detect over-reporting of drug use.

For these reasons, some programs rely on admission urine drug-screens to ensure that subjects have a drug-use problem. Individuals

who test negative for drugs over the first few weeks of the program may subsequently be deemed ineligible. This could have the unintended consequence of inducing subjects to use drugs when they first enter the program in order to avoid being excluded and assigned to a more severe criminal disposition. Anecdotally, some drug court participants in the authors' studies have reported in confidential research interviews that they took drugs prior to intake to ensure they would be accepted into the program. Unfortunately, there are no easy solutions to these problems and practitioners must rely on their clinical judgment and experience to detect individuals who were possibly diverted into treatment inappropriately.

A related concern is whether offenders need be desirous of treatment or motivated to stop using drugs in order to benefit from drug treatment. Evidence does suggest that intrinsic motivation for change predicts post-treatment improvements (e.g., Prochaska, DiClemente, & Norcross, 1992). However, evidence also suggests that subjects who are legally coerced into treatment perform as well or better than those who ostensibly enter treatment voluntarily (e.g., Farabee, Prendergast, & Anglin, 1998; Marlowe et al., 2001). It appears that length of tenure in treatment is most predictive of outcomes, regardless of whether that tenure is influenced by internal motivation, external legal pressures, or some combination of the two.

This suggests that motivation for change may be a welcome positive prognostic indicator at baseline, but perhaps need not be a prerequisite for entry into a diversionary program. This is fortunate, because it is difficult to reliably and validly measure intrinsic motivation for change. Similar to measures of drug-use severity, instruments that measure motivation for change can be easily faked because the items are transparent in content. The most commonly used instruments, for example, inquire whether the subject believes he or she has a problem worth changing, and call for a yes/no or true/false response. Offenders who wish to enter a diversionary program can easily gather which is the "correct" answer. Thus, rather than focusing on internal motivational states that cannot be observed or validated, it appears more justifiable to improve the programmatic elements of various initiatives to ensure that subjects' behaviors are reliably monitored and responded to.

On a final note, many research studies have reported that certain personality disorders are associated with poorer drug treatment response. In particular, a diagnosis of Antisocial Personality Disorder (APD)—characterized by chronic and persistent antisocial behavior, irresponsibility,

and selfishness (American Psychiatric Association, 1994)—is associated with lower retention rates in substance abuse treatment (Goldstein et al., 1999; Leal, Ziedonis, & Kosten, 1994; Marlowe, Kirby, Festinger, Husband, & Platt, 1997), higher rates of program non-completion (Alterman, Rutherford, Cacciola, McKay, & Boardman, 1998), and shorter time to first relapse following graduation from treatment (Goldstein et al., 2001). A few studies, however, have reported that substance abusers with APD generally performed equivalently to other clients (e.g., Brooner, Kidorf, King, & Steller, 1998; Cacciola, Alterman, Rutherford, & Snider, 1995; Longabaugh et al., 1994; McKay, Alterman, Cacciola, Mulvaney, & O'Brien, 2000; Messina, Wish, & Nemes, 1999). The discrepancies across studies may be attributable to at least two factors. First, subjects with APD may respond poorly to typical drug treatment programs, but may respond well to highly structured and closely monitored interventions. Second, there may be excessive heterogeneity within the diagnosis of APD, such that only the more seriously antisocial individuals may perform poorly in drug treatment.

As was described previously, studies in drug courts found an interaction effect between the schedule of court hearings and subjects' prior history of drug treatment failures. In those same studies, a comparable interaction effect was also found for APD. Specifically, misdemeanor and felony drug court clients with APD provided significantly more drug-positive urine samples, reported significantly more days of alcohol intoxication, and were significantly more likely to be terminated from the drug court program when they were assigned to as-needed court hearings; however, subjects with APD generally performed equivalently to other clients when they were scheduled to attend bi-weekly court hearings (Festinger et al., 2002; Marlowe et al., in press). This lends support to the hypothesis that outcomes for APD clients may be improved by providing them with more intensive structure and monitoring.

It is possible that drug offenders with a more severe subtype of APD may be at greatest risk for failure in rehabilitation programs. Psychopathy is a subtype of APD that is characterized by severe narcissism and emotional detachment in addition to chronic antisocial behavior. Psychopathy has consistently emerged in research studies as one of the strongest predictors of violence and other criminal activity in offender and forensic-psychiatric populations (Harris, Rice, & Cormier, 1991; Hart, Kropp, & Hare, 1988; Hemphill, Hare, & Wong, 1998; Serin, 1996; Serin & Amos, 1995). Among prison inmates, psychopaths are approximately three times more likely to recidivate than non-psychopaths (Hemphill et al.,

1998). In one study of over 1000 recently released civilly committed psychiatric patients, psychopathy emerged as the strongest predictor of violence out of 134 risk factors that were studied (Monahan et al., 2001). Few studies have specifically addressed outcomes for psychopaths in drug treatment and further research is needed to determine whether these individuals may be least amenable to drug treatment services.

Unfortunately, research on APD and psychopathy may be of greater theoretical value than practical value because of the high assessment burden. The most commonly used and better-validated instruments for APD and psychopathy require professional interviewing skills, clinical judgment, and access to fairly extensive background records and historical data to render an accurate diagnosis. It is questionable whether typical offender rehabilitation programs have sufficient resources and expertise to complete these assessments. Without such resources, it may be necessary to rely on more easily collected data elements such as offenders' past treatment history, past criminal history, and current response to treatment in making treatment-amenable determinations.

Conclusion

In many respects, the construct of amenability to treatment reflects a tentative conclusion rather than a prediction. The fact is that relatively little is known about what types of drug offenders are apt to succeed in rehabilitative programs. In the absence of such evidence, reasonable approximations or extrapolations must be made from existing data and from commonsensical notions about the harbingers of success. Consistent with the belief that the past is prologue to the future, it is generally presumed that prior criminal history, prior treatment history, and current performance in treatment are among the most robust predictors of future treatment response. As such, offenders are conclusively deemed to be unamenable to treatment if they committed serious or violent prior offenses, failed in previous rehabilitative programs, or recidivated during the current treatment episode. At this stage in our knowledge, these are not unreasonable assumptions and there are some data to support them; however, in the future, it is hoped that social science research will contribute more sensitive and robust predictors of treatment response.

References

- Alterman, A. I., Rutherford, M. J., Cacciola, J. S., McKay, J. R., & Boardman, C. R. (1998). Prediction of 7 months methadone maintenance treatment response by four measures of antisociality. *Drug and Alcohol Dependence*, 49, 217-223.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Press.
- Andrews, D. A., & Bonta, J. (1998). *The psychology of criminal conduct* (2nd ed.). Cincinnati, OH: Anderson.
- Belenko, S., & Peugh, J. (1998). *Behind bars: Substance abuse and America's prison population*. New York: National Center on Addiction and Substance Abuse at Columbia University.
- Blumstein, A., & Cohen, J. (1987). Characterizing criminal careers. *Science*, 237, 985-991.
- Bonta, J. (2002). Offender risk assessment: Guidelines for selection and use. *Criminal Justice and Behavior*, 29, 355-379.
- Brewer, D. D., Catalano, R. F., Haggerty, K., Gainey, R. R., & Fleming, C. B. (1998). A meta-analysis of predictors of continued drug use during and after treatment for opiate addiction. *Addiction*, 93, 73-92.
- Brooner, R. K., Kidorf, M., King, V., & Steller, K. (1998). Preliminary evidence of good treatment response in antisocial drug abusers. *Drug and Alcohol Dependence*, 49, 249-260.
- Cacciola, J. S., Alterman, A. I., Rutherford, M. J., & Snider, E. C. (1995). Treatment response and problem severity of antisocial personality substance abusers. *Journal of Nervous and Mental Disease*, 183, 166-171.
- California Substance Abuse and Crime Prevention Act of 2000, Cal. Penal Code §§ 1210 *et seq.* (Deering 2003).
- Cottle, C. C., Lee, R. J., & Heilbrun, K. (2001). The prediction of criminal recidivism in juveniles: A meta-analysis. *Criminal Justice and Behavior*, 28, 367-394.
- Farabee, D., Joshi, V., & Anglin, M. D. (2001). Addiction careers and criminal specialization. *Crime and Delinquency*, 47, 196-220.

- Farabee, D., Prendergast, M., & Anglin, M. D. (1998). The effectiveness of coerced treatment for drug-abusing offenders. *Federal Probation*, 62, 3-10.
- Festinger, D. S., Marlowe, D. B., Lee, P. A., Kirby, K. C., Bovasso, G., & McLellan, A. T. (2002). Status hearings in drug court: When more is less and less is more. *Drug and Alcohol Dependence*, 68, 151-157.
- Frase, R. S. (1991). Defendant amenability to treatment or probation as a basis for departure under the Minnesota and Federal sentencing guidelines. *Federal Sentencing Reporter*, (May/June), 328-333.
- Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology*, 34, 575-596.
- Goldstein, R. B., Bigelow, C., McCusker, J., Lewis, B. F., Mundt, K. A., & Powers, S. I. (2001). Antisocial behavioral syndromes and return to drug use following residential relapse prevention/health education treatment. *American Journal of Drug and Alcohol Abuse*, 27, 453-482.
- Goldstein, R. B., Powers, S. I., McCusker, J., Lewis, B. F., Bigelow, C., & Mundt, K. A. (1999). Antisocial behavioral syndromes among residential drug abuse treatment clients. *Drug and Alcohol Dependence*, 53, 171-187.
- Gronquist v. Walter*, 2001 U.S. App. LEXIS 18667 (9th Cir. 2001).
- Harris, G. T., Rice, M. E., & Cormier, C. A. (1991). Psychopathy and violent recidivism. *Law and Human Behavior*, 15, 625-637.
- Harrison, P. M., & Beck, A. J. (2002). *Prisoners in 2001* [No. NCJ-195189]. Washington, DC: Bureau of Justice Statistics, U.S. Dept. of Justice.
- Harrison, P. M., & Karberg, J. C. (2003). *Prison and jail inmates at midyear 2002* [No. NCJ-198877]. Washington, DC: Bureau of Justice Statistics, U.S. Dept. of Justice.
- Hart, S. D., Kropp, P. R., & Hare, R. D. (1988). Performance of male psychopaths following conditional release from prison. *Journal of Consulting and Clinical Psychology*, 56, 227-232.
- Hemphill, J. R., Hare, R. D., & Wong, S. (1998). Psychopathy and recidivism: A review. *Legal and Criminological Psychology*, 3, 139-170.
- Hepburn, J. R., & Albonetti, C. A. (1994). Recidivism among drug offenders: A survival analysis of the effects of offender characteristics, type of offense, and two types of intervention. *Journal of Quantitative Criminology*, 10, 159-179.
- Hser, Y. I., Grella, C. E., Chou, C. P., & Anglin, M. D. (1998). Relationships between drug treatment careers and outcomes: Findings from the National Drug Abuse Treatment Outcome Study. *Evaluation Review*, 22, 496-519.
- Hser, Y. I., Grella, C. E., Hsieh, S. C., Anglin, M. D., & Brown, B. S. (1999). Prior treatment experience related to process and outcomes in DATOS. *Drug and Alcohol Dependence*, 5, 137-150.
- Hser, Y. I., Joshi, V., Anglin, M. D., & Fletcher, B. (1999). Predicting post-treatment cocaine abstinence for first-time admissions and treatment repeaters. *American Journal of Public Health*, 89, 666-671.
- In re Dasinger*, 2002 Cal. App. LEXIS 6713 (2002).
- In re Mehdizadeh*, 105 Cal. App. 4th 995 (2003).
- Langan, P. A., & Levin, D. J. (2002). *Recidivism of prisoners released in 1994* [No. NCJ-193427]. Washington, DC: Bureau of Justice Statistics, U.S. Dept. of Justice.
- Leal, J., Ziedonis, D., & Kosten, T. (1994). Antisocial personality disorder as a prognostic factor for pharmacotherapy of cocaine dependence. *Drug and Alcohol Dependence*, 35, 31-35.
- Lee, P. A., Marlowe, D. B., Festinger, D. S., Cacciola, J. S., McNellis, J., Schepise, M. M., Merrill, J. C., Harrell, A. V., & McLellan, A. T. (2001). Did "Breaking the Cycle" (BTC) clients receive appropriate services? [abstract]. *Drug and Alcohol Dependence*, 63 (Supp. 1), S89. Presentation at the 63rd Annual Scientific Meeting, College on Problems of Drug Dependence, Scottsdale, AZ.
- Longabaugh, R., Rubin, A., Malloy, P., Beattie, M., Clifford, P. R., & Noel, N. (1994). Drinking outcomes of alcohol abusers diagnosed as antisocial personality disorder. *Alcoholism: Clinical and Experimental Research*, 18, 778-785.
- Maddux, J. F., Prihoda, T. J., & Desmond, D. P. (1994). Treatment fees and retention on methadone maintenance. *Journal of Drug Issues*, 24, 429-443.
- Marlowe, D. B. (2002). Effective strategies for intervening with drug abusing offenders. *Villanova Law Review*, 47, 989-1025.
- Marlowe, D. B., Festinger, D. S., & Lee, P. A. (2003). The role of judicial status hearings in drug court. *Offender Substance Abuse Report*, 3, 33-46.
- Marlowe, D. B., Festinger, D. S., & Lee, P. A. (in press). The judge is a key component of drug court. *National Drug Court Institute Review*.
- Marlowe, D. B., Festinger, D. S., Lee, P. A., Schepise, M. M., Hazzard, J. E. R., Merrill, J. C., Mulvaney, F. D., & McLellan, A. T. (2003). Are judicial status hearings a "key component" of drug court? During-treatment data from a randomized trial. *Criminal Justice and Behavior*, 30, 141-162.
- Marlowe, D. B., Glass, D. J., Merikle, E. P., Festinger, D. S., DeMatteo, D. S., Marczyk, G. R., & Platt, J. J. (2001). Efficacy of coercion in substance abuse treatment. In F. M. Tims, C. G. Leukefeld, & J. J. Platt (Eds.), *Relapse and recovery in addictions* (pp. 208-227). New Haven, CT: Yale University Press.
- Marlowe, D. B., Kirby, K. C., Festinger, D. S., Husband, S. D., & Platt, J. J. (1997). Impact of comorbid personality disorders and personality disorder symptoms on outcomes of behavioral treatment for cocaine dependence. *Journal of Nervous and Mental Disease*, 185, 483-490.
- Marshall v. United States*, 414 U.S. 417 (1974).
- Martin, S. S., Butzin, C. A., Saum, S. A., & Inciardi, J. A. (1999). Three-year outcomes of therapeutic community treatment for drug-involved offenders in Delaware. *Prison Journal*, 79, 294-320.
- McKay, J. R., Alterman, A. I., Cacciola, J. S., Mulvaney, F. D., & O'Brien, C. P. (2000). Prognostic significance of antisocial personality disorder in cocaine-dependent patients entering continuing care. *Journal of Nervous and Mental Disease*, 188, 287-296.
- McLellan, A. T., Lewis, D. C., O'Brien, C. P., & Kleber, H. D. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *JAMA*, 284, 1689-1695.

- Melton, G., Petrila, J., Poythress, N., & Slobogin, C. (1997). *Psychological evaluations for the courts: A handbook for mental health professionals and lawyers* (2nd ed.). New York: Guilford.
- Merrill, J., Alterman, A., Cacciola, J., & Rutherford, M. (1999). Prior treatment history and its impact on criminal recidivism. *Journal of Substance Abuse Treatment, 17*, 313-319.
- Messina, N. P., Wish, E. D., & Nemes, A. (1999). Therapeutic community treatment for substance abusers with antisocial personality disorder. *Journal of Substance Abuse Treatment, 17*, 121-128.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*, 674-701.
- Monahan, J., Steadman, H. J., Silver, E., Appelbaum, P. S., Robbins, P. C., Mulvey, E. P., Roth, L. H., Grisso, T., & Banks, S. (2001). Rethinking risk assessment: The *MacArthur study of mental disorder and violence*. New York: Oxford University Press.
- Morgan, K. D. (1993). Factors influencing probation outcome: A review of the literature. *Federal Probation, 57*, 23-29.
- Mulvey, K. (in press). Substance abuse counselor characteristics. *Journal of Substance Abuse Treatment*.
- Narcotic Addict Rehabilitation Act of 1966, Pub. L. No. 89-793, 80 Stat. 1438, 18 USC §§ 4251-4255 (repealed 1984).
- National Academy of Sciences. (2001). *Informing America's policy on illegal drugs: What we don't know keeps hurting us*. Washington, DC: National Academy Press.
- People v. Campbell*, 106 Cal. App. 4th 808 (2003).
- People v. Lee*, 2002 Cal. App. Unpub. LEXIS 6828 (2002).
- People v. Phelps*, 2003 Cal. App. Unpub. LEXIS 2480 (2003).
- People v. Superior Court of Napa County*, 98 Cal. App. 4th 78 (2002).
- People v. Superior Court of San Bernardino County*, 97 Cal. App. 4th 530 (2002).
- People v. Superior Court of Santa Clara County*, 104 Cal. App. 4th 692 (2002).
- People v. Williams*, 106 Cal. App. 4th 694 (2003)
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*, 1102-1114.
- Roundtree, G., Edwards, D., & Parker, J. (1984). A study of personal characteristics related to recidivism. *Journal of Offender Counseling Services and Rehabilitation, 8*, 53-61.
- Rothbard, A., Alterman, A., Rutherford, M., Liu, F., Zelinski, S., & McKay, J. (1999). Revisiting the effectiveness of methadone treatment on crime reductions in the 1990s. *Journal of Substance Abuse Treatment, 16*, 329-335.
- Serin, R. C. (1996). Violent recidivism in criminal psychopaths. *Law and Human Behavior, 20*, 207-217.
- Serin, R., & Amos, N. (1995). The role of psychopathy in the assessment of dangerousness. *International Journal of Law and Psychiatry, 18*, 231-238.
- Simpson, D. D., & Joe, G. W. (1993). Motivation as a predictor of early dropout from drug abuse treatment. *Psychotherapy: Theory, Research, Practice, Training, 30*, 357-368.
- Simpson, D. D., Savage, L. J., & Joe, G. W. (1980). Treatment histories of clients treated for drug abuse. *American Journal of Drug and Alcohol Abuse, 7*, 127-140.
- Slobogin, C. (1999). Treating kids right: Deconstructing and reconstructing the amenability to treatment concept. *Journal of Contemporary Legal Issues, 10*, 299-333.
- State v. McNallie*, 870 P.2d 295 (Wash. 1994).
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2001). *National Survey of Substance Abuse Treatment Services* (N-SSATS). Rockville, MD: Author.
- United States v. Atkins*, 116 F.3d 1566 (D.C. Cir. 1997).
- Violent Crime Control and Law Enforcement Act of 1994, Pub. L. No. 103-322, 108 Stat. 1796, 42 USC §§ 13701 *et seq.* (2003).

Sanctions and Rewards in Prison-Based Therapeutic Community Treatment

William M. Burdon, Ph.D.

UCLA Integrated Substance Abuse Programs

Michael L. Prendergast, Ph.D.

UCLA Integrated Substance Abuse Programs

Vitka Eisen, Ed.D.

Walden House, Inc.

Nena P. Messina, Ph.D.

UCLA Integrated Substance Abuse Programs

IN RESPONSE TO the increasing numbers of offenders incarcerated for drug-related offenses, the last two decades have witnessed a significant expansion in prison-based substance abuse treatment. Although a variety of approaches to treating substance-abusing inmates have been developed, the most common treatment modality used in prisons is the therapeutic community (TC). It is also the modality that has received the most attention from researchers in recent years.

Evaluations of prison-based TC programs conducted in several states and within the federal prison system have provided empirical support for the continued development of these programs throughout the nation. Findings from these studies indicate that prison-based TC treatment is effective at reducing recidivism and relapse to drug use, especially when combined with continued treatment in the community following release from prison (e.g., Knight, Simpson, & Hiller, 1999; Martin, Butzin, Saum, & Inciardi, 1999; Wexler, De Leon, Kressel, & Peters, 1999; Wexler, Melnick, Lowe, & Peters, 1999). Overall, when the findings of TC treatment studies are standardized and combined using meta-analytic techniques, the weighted mean effect size for recidivism (using the *r* index) is .13, which can be

interpreted as a 13 percent difference in recidivism between those who received TC treatment and those who received no or minimal treatment (Pearson & Lipton, 1999).

Although the research on TC treatment programs indicates that this approach can be effective at reducing recidivism and relapse, given the relatively small effect size associated with the TC treatment approach, it is clear that there is room for improvement. One possible target for improving the outcomes of prison-based treatment programs is client motivation and participation in treatment.

As is the case with substance abuse treatment with criminal justice populations in general, participation in prison-based substance abuse treatment programs often involves some level of coercion. In some cases, it is mandated.¹ In addition, especially in prison-based programs where treatment participants are not fully segregated from the general population, the prison subculture often actively and openly discourages inmate participation or engagement in treatment programs. As a result, treatment providers must deal with clients who have low levels of motivation for treatment and who remain unengaged in the treatment program. Many inmate participants, especially those who are mandated into treatment or who remain exposed to the negative influences of the prison subculture, often exhibit

high degrees of resentment and resistance to efforts to engage them in program activities. Some may even deliberately disrupt programming activities, thus negatively impacting the ability of the treatment provider to deliver effective treatment services to those who are motivated and engaged in the treatment program.

The challenge for treatment providers, therefore, is to develop innovative ways to overcome this resentment and resistance; to effectively discourage behaviors that are disruptive to the treatment program, while at the same time encouraging behaviors that promote client participation and engagement in the treatment process. This paper will explore the roles that sanctions and rewards play in promoting client motivation and involvement in prison-based TC substance abuse treatment programs.

Sanctions for inappropriate behavior take the form of TC sanctions (e.g., behavior contracts, learning experiences, pull-ups) or correctional sanctions (e.g., documented disciplinary actions, loss of credited time, administrative segregation); inmates are often subjected to both types of sanctions for the same behavioral transgression. This practice of "double sanctioning" can have a negative impact on client morale and motivation and treatment effectiveness, especially when TC and correctional staff apply sanctions inconsistently. This paper presents a proposed model for

¹The distinction is that coerced treatment allows for some degree of choice on the part of the inmate, whereas mandated treatment does not.

assessing behavioral transgressions and eliminating inconsistencies in the administering of TC and correctional sanctions.

Systems that reward appropriate behaviors among inmate-clients are largely non-existent or are under-utilized in prison-based substance abuse treatment environments, but can serve to promote motivation and involvement in treatment program activities when properly structured and administered. The use of behavioral reinforcement approaches for promoting client participation and engagement in treatment will be discussed.

Sanctioning Inappropriate Behavior

By their nature, correctional environments enforce compliance with institutional rules and codes of conduct through negative sanctions—the punishment to individuals who engage in behaviors that violate institutional rules and codes of conduct. Within the context of prison-based treatment programs, behavioral transgressions must usually be reported to correctional staff, regardless of their severity. Standard operating procedures of prisons demand that behavioral transgressions coming to the attention of any staff member must be reported and sanctioned in accordance with the existing institutional sanctions protocol. This process is deemed essential to maintaining order, safety, and security among inmates and staff in the correctional setting.

Similarly, TC method prescribes a system of graduated sanctions, ranging from “verbal correctives” to “disciplinary actions,” that are to be used to respond to behavioral transgressions within the community environment. The TC method teaches that sanctions (along with privileges) are an integral part of an interrelated system that TCs use to express the extent to which the community approves or disapproves of individual members’ “behaviors and attitudes concerning the norms of daily living, recovery, and right living teachings of the TC” (De Leon, 2000, p. 211). As such, treatment staff in prison-based TCs often place a priority on imposing *TC sanctions* as opposed to standard *correctional sanctions* when responding to behavioral transgressions.

Institutional policies that require the reporting of behavioral transgressions and prescribe the types of sanctions that are to be administered thus exist alongside the desire of treatment staff to use the system of graduated TC sanctions to promote, sustain, and reinforce the TC culture. As a result, inmate-clients may be subjected to two sanctions for a single behavioral transgression, one imposed by corrections officials in accordance with institutional policy, and the other imposed by TC staff

(or members) in accordance with TC philosophy and method. Given the underlying rationales for both types of sanctions, the practice of “double sanctioning” may not be avoidable and, indeed, administering both correctional and TC sanctions may serve complementary purposes, especially in prison-based TCs where clients are not fully segregated from the general prison population. Correctional sanctions serve the purpose of ensuring order, safety, and security within the larger prison community. TC sanctions serve the purpose of promoting, sustaining, and reinforcing the existence of a therapeutic culture in the treatment environment.

From the inmate-client’s perspective, however, this distinction may not be obvious or clearly delineated. As a result, the inmate-client may view double sanctioning as unfair and indicative of a lack of coordination and communication between treatment and institutional staff. These feelings are reinforced, and to some extent justified, when correctional and TC sanctions are applied inconsistently for the same behavioral transgression. This is likely to happen if treatment and correctional staff hold different views regarding the severity of a particular behavioral transgression. Given that the type of sanction administered is generally dependent on the severity of the transgression, the inmate-client may be subjected to sanctions that differ in terms of their severity for the same transgression (e.g., a verbal warning from a correctional officer versus a loss of phase status by the TC, or loss of good time credit as a correctional sanction versus a behavioral contract as a TC sanction).

To counter this perceived unfairness, the distinction between correctional and TC sanctions and the rationale behind administering both types of sanctions should be clearly communicated to inmate-clients at the time they enter treatment. Just as important, treatment and correctional staff should communicate with each other when behavioral transgressions occur, agree on the severity of the transgression, and agree on their respective responses to ensure that the two types of sanctions (if any are to be applied) are applied consistently. Without some level of ongoing communication and coordination between treatment and custody staff, independently assessing behavioral transgressions and deciding which sanctions to administer is certain to result in inconsistencies in the application of TC sanctions by treatment staff and correctional sanctions by custody staff, further compounding clients’ resentment and resistance to the treatment program, treatment staff, and institutional authority.

Establishing guidelines or a protocol that can be agreed to and followed by both treatment and custody staff for assessing behavioral transgressions and deciding upon appropriate sanctions can significantly reduce or eliminate disparities in the application of sanctions and (as a result) have a positive effect on offenders’ participation in treatment (Tonry, 1998). The following decision-making model represents only one example of how treatment and custody staff can come to a consensus on sanctioning inappropriate behaviors, thus eliminating inconsistencies in the severity of TC and correctional sanctions that are applied in response to behavioral transgressions. Once treatment and custody staff have agreed on a model to be used, it is important that they maintain some level of consistent ongoing communication to assess its usefulness, identify problems or shortcomings with it, and develop and implement changes where desired or needed. Periodic training sessions should be held with both treatment and custody staff to train new staff on the use of the model, and train existing staff on any modifications that have been mutually agreed to and implemented.

A Sanctions Decision-Making Model

Within both correctional environments and TCs, sanctions for inappropriate behavior can be viewed as lying along a 5-point continuum ranging from mild to severe (Level 1 to Level 5; see Table 1). Mild sanctions (Level 1) are most often undocumented verbal admonishments (correctional sanction) or pull-ups (TC sanction). Intermediate sanctions (Level 3) consist of documentation of an institutional rules violation that becomes part of an inmate’s permanent file (correctional sanction) or a learning experience or behavior contract (TC sanction). Finally, severe sanctions (Level 5) consist of loss of good-time credit and/or transfer to an administrative segregation unit (correctional sanction) or banishment from the community (TC sanction).

Whether the sanction is being initiated by a member of the treatment staff or a member of the custody staff, any decision to initiate a sanction against an inmate for inappropriate behavior involves a certain amount of structured discretion to determine the level of sanction imposed (Taylor & Mason, 2002). This structured discretion is independently exercised by treatment staff and custody staff in different environments (i.e., prison versus treatment) that have different and often conflicting philosophies and policies to guide and influence staff decisions about applying sanc-

TABLE 1
Sanction Types

Level	Correctional	TC*
1	Verbal (not documented)	Verbal pull-ups
2	Verbal (documented)	Bookings
3	Administrative rules violation	Learning experiences
4	Serious rules violation	Loss of phase status
5	Administrative Segregation	Banishment

*Source: De Leon (2000)

tions (e.g., institutional rules and regulations governing inmate behavior within the institution and TC house and cardinal rules governing behavior within the treatment environment).

When exercising discretion, however, both treatment staff and custody staff will often take into account similar factors that are related to the behavior exhibited. Primary among these are 1) the *seriousness* of the behavioral transgression; 2) the *frequency/pattern* with which a particular behavioral transgression occurs; and 3) the *unexpectedness* of the transgression; the degree to which the behavioral transgression was expected, given existing events or circumstances.

When assessing the *seriousness* of the behavioral transgression, the individual initiating the sanction looks at factors such as: Was the behavior threatening or injurious to others? Was it legal or illegal behavior? Did the behavioral transgression produce a victim, or was it a victimless transgression? Did the individual committing the transgression voluntarily disclose or confess to the behavior, or did it come to the attention of others (i.e., treatment or correctional staff) by some other means?

When assessing the *frequency/pattern* of a behavioral transgression, the individual initiating the sanction considers factors that help him/her decide if the behavior is exhibited frequently or if it represents a pattern of behavioral transgressions. To determine this, the individual will consider such questions as: Has the person engaged in the same or similar behaviors in the past? How much time has elapsed since the last occurrence of the same or a similar behavioral transgression? Does the behavior represent an overall pattern that needs to be addressed?

Finally, when assessing the *unexpectedness* of the behavioral transgression, the individual administering the sanction looks at such factors as: Was the behavior considered normal for the individual? (Individuals who are dually diag-

nosed may be more prone to exhibiting certain behaviors that would otherwise be considered inappropriate.) Are personal issues or events involved that may explain the behavior? For example, the recent death of a friend or family member or receiving bad news from home may trigger feelings of depression or anger that manifest themselves in inappropriate behavior that is otherwise uncharacteristic of the individual.

The weight given to each of these three factors may vary depending on the particular behavioral transgression and who is assessing it (treatment or custody staff). However, it is likely that the seriousness of the behavioral transgression will receive the most consideration, since it more directly reflects the actual behavior exhibited. Thus, it is likely to carry more weight than the other two factors.

Consistent with this, more weight is given in this model to the seriousness of the behavioral transgression than to its frequency/pattern and unexpectedness. This is accomplished by allowing staff to assign higher values to the seriousness factor. Seriousness lies on a 10-point continuum (not serious at all=1 to very serious=10), whereas the frequency/pattern and the unexpectedness of the behavioral transgression lie along 5-point continuums, ranging from not at all frequent or unexpected (1) to very frequent and unexpected (5).

When a behavioral transgression occurs, treatment and custody staff should communicate with each other and reach a consensus on where the behavioral transgression lies along each continuum by agreeing on a point value to assign for each of the 3 factors (i.e., 1-10 for seriousness and 1-5 each for frequency/pattern and unexpectedness). Once this has been completed, the average of the three point values is calculated and rounded to the nearest whole number. Given the total population of point-value combinations (N=250), possible average scores range from 1.0 (i.e., a value of 1 assigned to each factor) to 6.7 (i.e., a value of 10 assigned to seriousness, 5 assigned to frequen-

cy/pattern, and 5 assigned to unexpectedness). The distribution of possible average scores rounded to the nearest whole number and the level of sanction to be applied based on the mean rounded scores are shown in Table 2.

As stated above, this model is only an example. Variations are possible. For example, treatment and custody staff may decide on fewer levels of sanctions (e.g., 3 rather than 5). In addition, other factors not considered in this model can be included and assigned a range of possible point values. Also, treatment and custody staff may agree that certain behaviors (e.g., physical violence against another person) or any behavioral transgression that is assigned a seriousness point value greater than 7 should automatically receive a Level 4 or 5 sanction, regardless of how infrequently the behavior has been exhibited in the past, how unexpected it was, or any other extenuating circumstances. The most important point is that treatment and custody staff agree on the model to be used, communicate with each other whenever a behavioral transgression calls for sanctioning, and apply consistent levels of sanctions for the same behavioral transgression.

Reinforcing Appropriate Behavior

As discussed above, correctional environments favor the use of negative sanctions (punishment) to enforce compliance with institutional rules and codes of behavioral conduct. Seldom, if ever, do inmates receive positive reinforcement for engaging in pro-social behaviors (i.e., complying with institutional rules and codes of behavioral conduct). This was confirmed in a series of focus groups conducted with treatment participants and treatment staff at five prison-based sub-

TABLE 2
Sanction Types

Mean Score (rounded)	Possible Occurrences*	Sanction Level
1	4	1
2	31	1
3	65	2
4	74	3
5	56	4
6	19	5
7	1	5

*N=250

stance abuse treatment programs in California, where treatment participation was mandated for eligible inmates. Both the participants (inmates) and treatment staff stated that there was too much reliance on punishment, and that the use of incentives or rewards in the treatment process would help to alleviate the resentment and resistance among the participants that resulted from being mandated into the treatment programs (Burdon, Prendergast, & Frankos, 2001).

Within prisons, most treatment programs dispense disciplinary actions against inmates who violate institutional or program rules, but often place little emphasis on rewarding specific acts of positive behavior (e.g., punctuality, participation, completion of treatment plan tasks). This appears to be primarily an artifact of the organizational reality that finds treatment programs operating within larger bureaucratic systems (corrections departments) that possess and promote a fundamentally different philosophy and policies regarding management of inmate behavior. Rewards, when they occur, most often take the form of verbal praise from a counselor or positive verbal peer comments (e.g., "push-ups" in the TC model of treatment; De Leon, 2000). More tangible reinforcement for positive behavior may take the form of moving a client to the next phase of the treatment program or conferring on him/her additional privileges. However, these types of reinforcement "tend to be intermittent and, in contrast to sanctions, less specific, not immediately experienced, and based on a subjective evaluation of a client's progress in treatment" (Burdon, Roll, Prendergast, & Rawson, 2001, p. 78).

Behavioral Reinforcement Approaches

The fundamental principle of behavioral reinforcement is the systematic application of positive reinforcement following demonstration of the desired behavior. Specifically, the delivery of a positively reinforcing "event" contingent upon the performance of a specific behavior results in the increased frequency of the specified behavior. The use of reinforcement for increasing desired behaviors has a long tradition of application in the behavioral literature (Bandura, 1969; Ullman & Krasner, 1965) and, more specifically, in alcohol and drug treatment (Higgins, Alessi, & Datona, 2002; Leibson, Tommasello, & Bigelow, 1978; Meyers & Smith, 1995; Miller, 1975), where this practice has been termed contingency management (CM). Its use with criminal justice populations, however, has received virtually no attention.

More than any other single approach for promoting behavior change in substance users, the

efficacy of CM-based approaches has a solid empirical foundation in the experimental literature. For the most part, CM reinforces abstinence from illicit drug use by delivering to study participants cash vouchers, tangible goods, or services contingent upon the delivery of urine samples that test negative for a target drug or set of drugs (e.g., cocaine, opiates). Most of the empirical research on the use of CM techniques among substance-abusing populations has found the approach to be effective at reducing the use of illicit drugs among opiate-addicted individuals (Downey, Helmus, & Schuster, 2000; Higgins, Roll, Wong, Tidey, & Dantona, 1999; Kidorf & Stitzer, 1999; Silverman, Preston, Stitzer, & Schuster, 1999).

An alternative to reinforcing abstinence from drug use is to reinforce pro-social behaviors that are incompatible with illicit drug use. This procedure involves articulating a set of "competing" behaviors that are incompatible with illicit drug use and reinforcing those behaviors. Doing so introduces the new behavior to the individual and increases the frequency of his/her engagement in that behavior. Subsequently, the naturally occurring reinforcing consequences (e.g., improved mental and physical health) are expected to sustain the new behavior after the CM procedure is discontinued. Research that has employed this approach has shown it to be effective (Elk, Mangus, Rhoades, Andres, & Grabowski, 1998; Iguchi et al., 1997; Jones, Haug, Silverman, Stitzer, & Svikis, 2001).

Closely related to reinforcing pro-social behaviors that are incompatible with illicit drug use is the practice of reinforcing treatment attendance and participation. Behavioral reinforcement of treatment attendance was the focus of some early studies using CM in alcohol treatment programs. In general, these studies found that reinforcing attendance increased treatment retention (Gallant et al., 1968), reduced unexplained absences (Ersner-Hershfield, Connors, & Maisto, 1981), and improved employment and social adjustment while decreasing criminal behavior among violent offenders (Funderburk et al., 1993).

Despite their success at reducing illicit drug use within the context of clinically- or community-based drug treatment programs, behavioral reinforcement procedures have been little used with substance-abusing incarcerated populations. A number of studies conducted in the 1970s used behavioral reinforcement techniques in an attempt to improve the management of inmate populations. For example, Bassett et al. (1974) awarded increased telephone privileges to inmates contingent on their attendance at a prison education center and reported subsequent improvement in their academic skills. Ellis (1993) found evidence of the effectiveness of behavioral reinforcement tech-

niques in reducing violent behavior among inmates. However, none of these studies used CM techniques within the context of prison-based programs for substance-abusing inmates.

Most studies testing the effectiveness of CM have been performed in experimental clinical settings and, as mentioned above, reinforce targeted behaviors by delivering to study participants cash vouchers, tangible goods, or services contingent upon their exhibiting the targeted behavior. While proven effective in these experimental settings, the practical application of behavioral reinforcement procedures to real-world treatment settings is less certain. For example, in prison-based treatment environments, care must be taken in selecting the appropriate types of behaviors that are to be targeted for reinforcement. Also, the types of rewards that are used to reinforce targeted behaviors are likely to be different from those normally used in CM studies.

The findings of previous research suggest that an appropriate role for behavioral reinforcement within prison-based substance abuse treatment programs would be to facilitate change in clients' cognitive processes (the goal of most treatment programs) by promoting clients' involvement in the full range of program activities that are designed to effect this change. To that end, behaviors targeted for reinforcement should be those that promote participation and engagement in the treatment process. These might include on-time attendance at required meetings, active participation in group meetings, satisfactory completion of assigned tasks (e.g., writing and essay, making contact with family members), or maintaining proper grooming habits. Such behaviors are likely to require close monitoring as well as objective means of assessing compliance and/or satisfactory completion.

Within the context of a prison-based treatment environment, use of cash vouchers or tangible goods and services to reinforce desired behaviors is likely to be prohibited due to the cost and institutional rules and regulations prohibiting these types of rewards. Transferring this technology to a prison-based treatment setting, therefore, will require treatment staff to develop innovative and less costly ways to reinforce desired behaviors. Examples of rewards that may be used to reinforce targeted behaviors include increased privileges within the TC, additional recreation (yard) time for the inmate, or low cost canteen items or vouchers. Group rewards may include celebratory meals or a movie night in the inmates' housing unit. In addition to being low cost, yet tangible, rewards used to reinforce targeted behaviors should have minimal impact on custody staff time and institutional resources.

Conclusion

A key characteristic of prison-based substance abuse treatment programs is that they operate *within* rather than *with* larger correctional systems. As such, the organizational culture and climate of the treatment organization often finds itself subordinated to the organizational culture and climate of the correctional system. Criminal justice and treatment agencies possess fundamentally different philosophies regarding drug use and abuse, which form the foundation of their organizational cultures and climates (Prendergast & Burdon, 2001).

Within this organizational reality, efforts to integrate new procedures or treatment protocols into the prison-based treatment environment, such as those discussed above, may be limited by these conflicting philosophies and the dominating influence that the organizational culture and climate of corrections maintains over those of the treatment provider. This is especially true for integrating behavioral reinforcement procedures into a prison-based treatment setting. Rewarding positive behavior conflicts with the underlying notion of prisons as punitive institutions. Many correctional staff may view this practice as rewarding inmates for "doing what they are supposed to do." In addition, institutional policies and the inmate subculture may present additional obstacles. For example, inmates who are not part of the treatment program and thus not eligible for behavioral reinforcement may file grievances based on unequal treatment. Also, certain types of rewards given for engaging in pro-social behaviors (e.g., increased phone privileges, additional trips to the canteen, increased recreation time) may pose logistical and security concerns for custody staff, who must make special accommodations in an otherwise rigid and structured schedule to allow inmates to obtain such rewards.

These and other issues are certain to impact the ability of treatment providers to integrate these new procedures or treatment strategies by presenting a different and more complex set of issues and obstacles than would be the case with community-based treatment programs (i.e., treatment programs that are not subject to the influences of the culture and climate of a larger organization). The contradictory (and often competing) philosophies and goals of the treatment and the criminal justice systems, combined with the relationship that exists between them (as a result of the treatment system having to work within the criminal justice system), shapes the manner in which negative behaviors in the treatment process are sanctioned and the manner in which positive behaviors can be and are reward-

ed. The ability of both treatment and correctional staff to recognize this reality and to mutually commit to engage in collaborative efforts is a necessary first step to overcoming the resulting obstacles to implementing innovative strategies that hold the promise of improving treatment effectiveness while accommodating institutional concerns relating to safety and security.

References

- Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart and Winston, Inc.
- Bassett, J., Blanchard, E., Harrison, H., & Wood, R. (1974). Applied behavior analysis on a county penal farm: A method of increasing attendance at a remedial education center. *Corrective and Social Psychiatry and Journal of Behavior Technology Methods and Therapy*, 20(1), 21-23.
- Burdon, W. M., Prendergast, M. L., & Frankos, C. (2001). *Prison-based therapeutic community treatment from the perspective of the participants*. Unpublished manuscript.
- Burdon, W., Roll, J. M., Prendergast, M., & Rawson, R. (2001). Drug courts and contingency management. *Journal of Drug Issues*, 31(1), 73-90.
- De Leon, G. (2000). *The therapeutic community: Theory, model, and method*. New York: Springer Publishing Company.
- Downey, K. K., Helmus, T. C., & Schuster, C. R. (2000). Treatment of heroin-dependent poly-drug abusers with contingency management and buprenorphine maintenance. *Experimental and Clinical Psychopharmacology*, 8(2), 176-84.
- Elk, R., Mangus, L., Rhoades, H., Andres, R., & Grabowski, J. (1998). Cessation of cocaine use during pregnancy: Effects of contingency management intervention on maintaining abstinence and complying with prenatal care. *Addictive Behaviors*, 23(1), 57-64.
- Ellis, J. (1993). Security officer's role in reducing inmate problem behaviors: A program based on contingency management. *Journal of Offender Rehabilitation*, 20(2), 61-72.
- Ersner-Hershfield, S. M., Connors, G. J., & Maisto, S. A. (1981). Clinical and experimental utility of refundable deposits. *Behavioral Research and Therapy*, 19(5) 455-457.
- Funderburk, F. R., MacKenzie, A., DeHaven, G. P., & Stefan, R. (1993). Evaluation of the multiple offender alcoholism project: Quasi-experimental evaluation strategy with a focus on individual change and quality of life. *Evaluation & Program Planning*, 16(3), 181-191.
- Gallant, D. M., Bishop, M. P., Faulkner, M. A., Simpson, L., Cooper, A., Lathrop, D., et al. (1968). A comparative evaluation of compulsory (group therapy and/or Antabuse) and voluntary treatment of the chronic alcoholic municipal court offender. *Psychosomatics*, 9(3), 303-310.
- Higgins, S. T., Alessi, S., & Datona, R. (2002). Voucher-based incentives: A substance abuse treatment innovation. *Addictive Behaviors*, 27, 887-910.
- Higgins, S. T., Roll, J. M., Wong, C. J., Tidey, J. W., & Dantona, R. (1999). Clinic and laboratory studies on the use of incentives to decrease cocaine and other substance use. In S. T. Higgins, & K. Silverman (Eds.), *Motivating behavior change among illicit-drug abusers* (pp. 35-56). Washington, DC: American Psychological Association.
- Iguchi, M. Y., Belding, M. A., Morral, A. R., Lamb, R. J., & Husband, S. D. (1997). Reinforcing operants other than abstinence in drug abuse treatment: An effective alternative for reducing drug use. *Journal of Consulting and Clinical Psychology*, 65(3), 421-428.
- Jones, H., Haug, N., Silverman, K., Stitzer, M., & Svikis, D. (2001). The effectiveness of incentives in enhancing treatment attendance and drug abstinence in methadone-maintained pregnant women. *Drug and Alcohol Dependence*, 61(3), 297-306.
- Kidorf, M., & Stitzer, M. L. (1999). Contingent access to clinic privileges reduces drug abuse in methadone maintenance patients. In S.T. Higgins, & K. Silverman (Eds.), *Motivating behavior change among illicit-drug abusers* (pp. 221-241). Washington, DC: American Psychological Association.
- Knight, K., Simpson, D. D., Hiller, & M. L. (1999). Three-year reincarceration outcomes for in-prison therapeutic community treatment in Texas. *Prison Journal*, 79(3), 337-351.

- Leibson, I. A., Tommasello, A. & Bigelow, G. E. (1978). A behavioral treatment of alcoholic methadone patients. *Annals of Internal Medicine*, 89, 342-344.
- Martin, S. S., Butzin, C. A., Saum, C. A., & Inciardi, J. A. (1999). Three-year outcomes of therapeutic community treatment for drug-involved offenders in Delaware: From prison to work release to aftercare. *Prison Journal*, 79(3), 294-320.
- Meyers, R., & Smith, J. (1995). *Clinical guide to alcohol treatment: The community reinforcement approach*. New York: Guilford Press.
- Miller, P. M. (1975). A behavioral intervention program for chronic public drunkenness offenders. *Archives of General Psychiatry*, 32, 915-918.
- Pearson, F. S., & Lipton, D. S. (1999). A meta-analytic review of the effectiveness of corrections-based treatments for drug abuse. *The Prison Journal*, 79(4), 384-410.
- Prendergast, M. L., & Burdon, W. M. (2001). Integrated systems of care for substance abusing offenders. In C. Leukefeld, F. Tims, & D. Farabee (Eds.), *Treatment of drug offenders: Policies and issues*. New York: Springer.
- Silverman, K., Preston, K. L., Stitzer, M. L., & Schuster, C. R. (1999). Efficacy and versatility of voucher-based reinforcement in drug abuse treatment. In S. T. Higgins, & K. Silverman (Eds.), *Motivating behavior change among illicit-drug abusers* (pp. 163-181). Washington, DC: American Psychological Association.
- Taylor, R. B., & Mason, R. J. (2002). Responses to prison for environmental criminals – Impacts of incident, perpetrator, and respondent characteristics. *Environment and Behavior*, 34(2), 194-215.
- Tonry, M. (1998). Intermediate sanctions in sentencing guidelines. *Crime and Justice: A Review of Research*, 23, 199-253.
- Ullman, L. P. & Krasner, L., (1965). *Case studies in behavior modification*. New York: Holt, Rinehart and Winston, Inc.
- Wexler, H. K., De Leon, G., Kressel, D., & Peters, J. (1999). The amity prison TC evaluation: Reincarceration outcomes. *Criminal Justice and Behavior*, 26(2), 147-167.
- Wexler, H. K., Melnick, G., Lowe, L., & Peters, J. (1999). Three-year reincarceration outcomes for Amity in-prison therapeutic community and aftercare in California. *Prison Journal*, 79(3), 312-336.

Treatment Research in OZ—Is Randomization the Ideal or Just Somewhere Over the Rainbow?*

Steven S. Martin, Senior Scientist

James A. Inciardi, Professor and Director

Daniel J. O'Connell, Research Associate

Center for Drug and Alcohol Studies

MEETING THE TREATMENT needs of offenders within the correctional system promises an important societal investment in reducing the number of incarcerated drug-involved offenders and the concomitant burgeoning costs of incarceration and health care. Researchers have documented the high costs of drug-abusing offenders whose criminal activity, criminal justice costs, often poor health status, and use of expensive public health services all put heavy burdens on the taxpayer and society (Harwood, Fountain & Livermore 1998; Harwood et al. 1984; Rice et al. 1990; French, Salomé and Carney 2002). Analyses of 26,000 drug users in the National Aids Demonstration Research (NADR) studies found that those who had been incarcerated had significantly higher rates of drug use, multiple drug use, daily drug injections, and unsafe needle use (Inciardi et al. 1993). These and other data (e.g., Chaiken 1989; Leukefeld & Tims 1988; Simpson, Wexler & Inciardi 1999) suggest that chronic drug users are found in the greatest concentrations among prisoners. Thus, correctional institutions should be excellent field settings for identifying concentrations of drug users, implementing treatment programs to a “captive” population, and rigorously assessing drug treatment outcomes among those chronic drug users who are most “expensive” for society.

Emphasizing effective treatment outcomes is necessary because addiction treatment is a service that is largely funded by the public sector. Recent studies show that 70 percent of treatment

funding comes from public coffers (Office of Applied Studies 1998). In the current climate of shrinking budgets, especially in state governments that fund most treatment, legislatures are increasingly seeking evidence that money spent on treatment is producing the desired effect. Treatment outcome studies must show that they reduce drug use. Also, directly or by implication, research needs to demonstrate that success in reducing drug use leads to reductions in criminal behavior, improvements in health status, and a decrease in the use of more costly health services—all of which, in turn, generate cost savings to other sectors of society.

Background on Research on Drug Treatment in Corrections

The need for drug treatment within a criminal justice framework is well documented (e.g., Inciardi 1993; Simpson et al. 1999). More contentious is how effective various modalities are, and whether the money spent is recouped later. Research focusing on the effectiveness of residential in-prison treatment has tended to show moderate but significant effects on recidivism and drug usage after release from prison (Gaes et al. 1999; Martin, Butzin & Inciardi 1995; Pelissier et al. 2001; Wexler et al. 1999). Persons receiving treatment in prison followed by continuing treatment in a halfway house show even more promising results than those who only receive in-prison treatment (Martin, Butzin & Inciardi

1995). A recent meta-analysis of 78 treatment outcome studies found that the treated groups reported significantly better outcomes than non-treated groups (Prendergast et al. 2002).

Studies examining the cost effectiveness of various treatment modalities have found substantial returns on money invested. A recent study by French and his colleagues found a cost-benefit ratio of 4:34 for programs studied in Washington State (French, Salomé & Carney 2002). One study (CALDATA) reported the cost-effectiveness of publicly supported treatment programs in California (California Department of Drug and Alcohol Programs 1994). The CALDATA Study reported 18-month savings from treatment of \$1.5 billion, with the largest savings coming from reduction in crime, followed by significant reductions in health care costs (ER admissions declined by a third). Studies conducted to date thus indicate that treatment is both effective and cost effective.

Criminal justice research faces daunting hurdles in design and implementation, however, and much of the research cited above suffers from longstanding problems (Apsler, 1991): not having proper control or comparison groups in the design, relying solely on self-reports of drug use and crime, and not having enough individual level impact data. More recently, Gaes has suggested that in-prison treatment designs are plagued by a combination of selection and attrition bias that makes randomization difficult (Gaes 1998). The process of selection, even in a

* This research was supported by Grant DAO6124 from the National Institute on Drug Abuse.

supposed randomized design, often results in groups that differ from one another in important ways. Gaes suggests that researchers should be cautious in designing comparison groups and recognize potential bias as well as explicitly spelling out the selection and mechanisms involved in the treatment regimen. Apsler (1991) listed additional factors that singly or together would improve treatment outcome research: measures on the variability among treatment programs, long project periods, objective validation of self-report measures, the cooperation of the treatment programs, large samples, multiple measures of treatment experience, and multiple measures of outcomes.

While these criticisms have been taken into account by prison treatment researchers, the dilemmas of conducting field studies that can be rigorously evaluated have proven difficult to solve. Consequently, most assessments of program effectiveness have been solely *-rather than outcome oriented* or have not incorporated multiple outcome criteria. Many times when outcome studies have been attempted, they have involved short follow-up time frames, lack of randomization, and have included only limited use of comparison groups, standardized measurement instruments, multivariate models, and appropriate control variables (Forcier 1991; Prendergast et al. 2002; Rouse 1991; Wexler 1995; De Leon, Inciardi & Martin 1995). To cite just one example, in Prendergast et al.'s (2002) meta analysis, only 7.7 percent of studies had a comparison group that actually received *no* treatment. Most received a routine or alternative treatment. Additionally, Prendergast et al. note that 59 percent of the studies in their sample used a random or *quasi-randomized* design. That means that 41 percent of studies were not able to even attempt to randomize the selection of treatment and comparison groups, and it is unclear what is included in the quasi-randomized design in many of the remaining studies.

While the problems with prison treatment studies are well known, what is less often discussed is why correctional research has proven to be so difficult. This paper is an attempt to shed light on why some textbook examples of research methods are largely unworkable and in some cases may be counterproductive in the criminal justice field. The treatment outcome for offenders in the Delaware study described in this paper highlights both problems and practical solutions to some of the above difficulties that are being applied to evaluate a treatment program in an often "uncontrolled" real world setting. The case study demonstrates the need for an effective process evaluation to understand what cannot be a *priori* "controlled" in the "experiment."

We go on to posit a "mixed mode" outcome analysis strategy that includes comparing five

client groups, two of which are randomly selected and three of which are not. Then, using the existing data, we posit some research hypotheses and give examples of an outcome that has been modeled in a multivariate analysis designed to control for known group differences. Although non-random group selection makes statistical judgment of significant effects open to question, such analyses may sometimes be necessary to make comparisons in field experiments.

Methods and Results of the Random Experiment

The study focuses on evaluating aspects of a multi-stage therapeutic community (TC) treatment program that was started as a research demonstration project in 1990 and which is now a continuing program in the Delaware correctional system. The use of TCs has expanded rapidly in prisons and community corrections settings. By the year 2000 over 300 TCs were operating in 47 states, and TCs currently operate in 54 countries (Rockholz 2000). In Delaware, there is an integrated continuum of corrections-based TC treatment that works in three stages tied to an inmate's changing correctional status: prison → work release → parole (Inciardi, Lockwood & Martin 1991, 1994). The effectiveness of such a continuum of correctional TC treatment with a focus on the work release stage has been shown to be more effective than in-prison treatment without the treatment continuum (Martin et al. 1999; Butzin et al. 2002; Wexler et al. 1999).

The original goal of the Delaware research was to examine the feasibility and clinical efficacy of a therapeutic community "work release" center for drug-involved felony offenders who had spent a number of years in prison. The issues of feasibility and efficacy were especially important, since the work release TC (CREST) represented the first attempt anywhere at developing a correctional work release program built on a therapeutic community model. The research design to evaluate CREST was primarily experimental, involving a randomized trial of the drug-involved inmates assigned to CREST with a group of drug-involved inmates assigned to regular work release.

Specifically, the design included a randomly selected sample of conventional work release residents with a past history of heavy drug use (the COMPARISON group). These releasees have relative freedom during working hours, but are held in secure dormitories after 10 p.m. Most attend AA/NA meetings at the work release center and have access to an on-site counselor but have little other treatment. The true "experimental" contrast in the study was between this COMPARISON group and the RANDOM-CREST group, a ran-

dom sample of work release clients with a history of past heavy drug use who were assigned to the CREST TC on a random basis. So, subjects coming to work release with a history of past drug use but no prison TC experience were randomly assigned to one of these two groups.

These two groups are compared in terms of relapse and recidivism measures 12 months after completing work release. The basic hypotheses can be stated as: Drug-involved offenders receiving treatment in a TC are more likely to remain arrest-free and be less drug-involved than those who do not have treatment. Other baseline characteristics thought to be related to relapse and recidivism are controlled in the model. The baseline measures are self-report items. Dichotomous baseline measures include gender, previous drug treatment, and ethnic group (White/NonWhite). Frequency of drug use was derived from questions asking frequency of use of each of the following: injecting or noninjecting cocaine, heroin, speed, crack, PCP, hallucinogens, and non-prescribed sedatives, stimulants, tranquilizers, analgesics or other opiates in the six months prior to prison. The maximum reported use of any drug was recorded on a scale of 0 (no use) to 6 (use more than once a day). Continuous baseline measures were number of prior arrests, number of previous incarcerations, and age. An examination of baseline characteristics in Table 1 suggests that the randomization was effective in producing reasonably equivalent groups. The only difference that approaches significance is percentage "White."

To examine the effect of treatment group in the standard randomized design (treatment versus comparison group), we report the results of regression analyses predicting to: 1) recidivism (logistic regression predicting the likelihood of remaining arrest-free) and 2) degree of relapse (OLS regression predicting the frequency of drug use) one year after leaving work release.

Figure 1 shows the predicted probabilities (shown as percentages) of arrest-free within each group one year after leaving work release, controlling for the mean effects of the other covariates. The other covariates that are significant in the model are age (older more likely to be arrest-free) and number of previous times arrested and number of previous times imprisoned (the more previous arrests and more times in prison, the less the probability of being arrest-free). It is apparent that the RANDOM-CREST group is significantly more likely to be arrest-free at follow-up (58 percent) compared to the COMPARISON group (43 percent).

Figure 2 presents the results of an OLS regression predicting scores on the dependent variable Frequency of Drug Use one year after work release

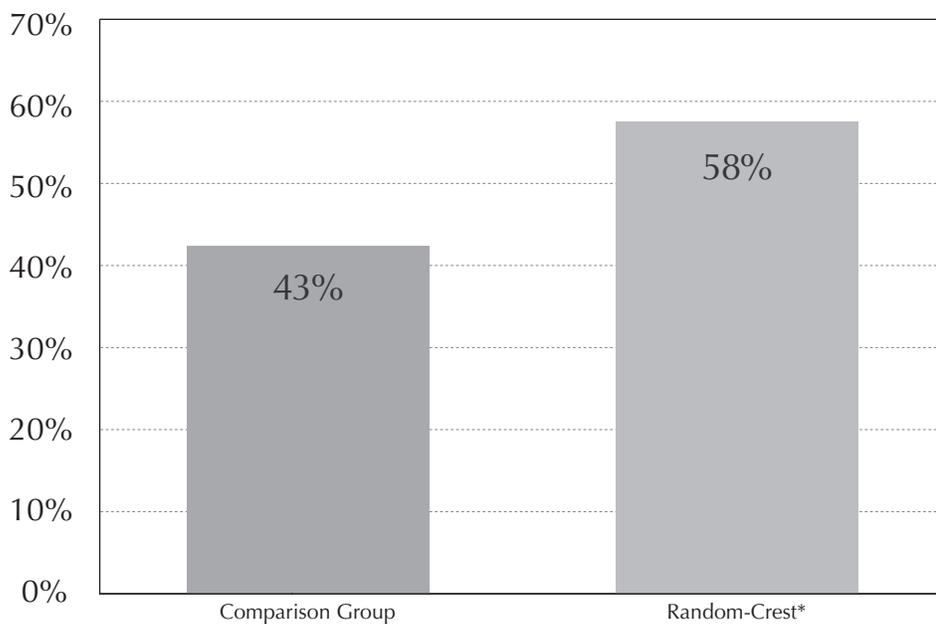
TABLE 1

*Baseline Sample Characteristics by Group:
Delaware Therapeutic Community Continuum*

	Comparison Group	Random Crest
N	248	182
Age	29.8	29.2
Number of Arrests	9.6	9.7
Times in Prison	3.2	2.9
Illegal Drugs Used	5.7	5.8
Drug use before prison	3.9	4.7
Male percent	81	77
White percent	30	25
Prior Treatment percent	75	79
Arrest-free at 12 Months percent	43	56

FIGURE 1

Percent Arrest Free 12 Months After Leaving Work Release, Randomized Model



*Significantly different from COMPARISON group, $p < .05$

Note: Predicted probabilities (shown as percents) of arrest-free by group controlling for mean scores on age, number of prior arrests, times in prison, number of illegal drugs used frequency of drug use prior to prison, gender, race, and prior treatment.

for each experimental group, again adjusted for the other independent variables. The covariates significant in this model are age (older clients have less drug use), previous times in prison (fewer times in prison the less drug use), and previous drug history (the more baseline drug use, the more follow-up drug use).

Again it is apparent that the treatment group is doing much better than the comparison group

one year after work release. The COMPARISON cases are averaging illegal drug use once a week or more often while the RANDOM-CREST group is averaging once a month use. In logistic regression analyses not reported here, the treatment group is significantly more likely to have used no drugs; in an OLS regression analysis among those who have used any illegal drugs, the treatment group uses less often.

Issues of Client Selection

A paper reporting these research results would be a useful contribution and likely accepted in peer review journals. The experimental contrast with the randomly selected groups produces significant and meaningful effects in the predicted direction and strongly supports the efficacy of a transitional TC for drug-involved work release clients. However, clients entering correctional TC treatment rarely get there by a random selection process (chaotic, yes; but random, no).

There were three other relevant offender treatment groups existing during and after the random sample selection that were not part of the experimental manipulation, but from whom baseline and follow-up data were collected. The first group is NON-RANDOM CREST—those assigned to CREST by various criminal justice practitioners. Persons in this group were not randomly assigned, but were placed in CREST by a judge, prison counselor, or prison review board. Most NON-RANDOM CREST clients were recruited after the random selection process stopped and treatment was taken over by the State. In addition, two groups who had been in the in-prison therapeutic community in Delaware, the KEY, are being followed as part of this study: 1) the KEY group releasees from the in-prison TC who did not go to CREST because they were released before CREST was operational or who “maxed out” their sentence and did not have to go to work release; and 2) the KEY-CREST group—all of those clients who graduated from the KEY and then went on to CREST for work release treatment. Although not randomly selected, each of these groups did include all clients coming from the KEY who were being classified for release. More important, each of these groups provides an important contrast with the “experimental” groups. Table 2 lays out some of the salient distinctions among the five groups.

Real world clients in TCs come from several sources. There are “walk-ins” seeking help who are screened and evaluated by staff to determine TC suitability. Prison-based TCs typically “recruit” candidates from the general prison population, followed by screening and evaluation by staff. Finally, many TCs accept or, more likely, are required to take court referrals. Judges will sentence an individual to a prison term, with a portion of the sentence suspended if the person completes the program. Additionally, some clients are referred to KEY or CREST as a result of a parole violation. In none of these scenarios are clients recruited through random assignment.

In fact, the RANDOM-CREST clients, those randomly assigned from a pool of work release eligibles with a history of drug abuse, could be more problematic than the non-random treat-

ment groups. Random assignment had a number of consequences. Some clients were not particularly excited about the prospect of entering CREST, but voluntarily accepted the assignment because they felt that turning it down might delay their move from prison to work release. Most adapted but some did not, and a few tried to poison the treatment environment. Many of these clients would not have gone to CREST without the random selection process.

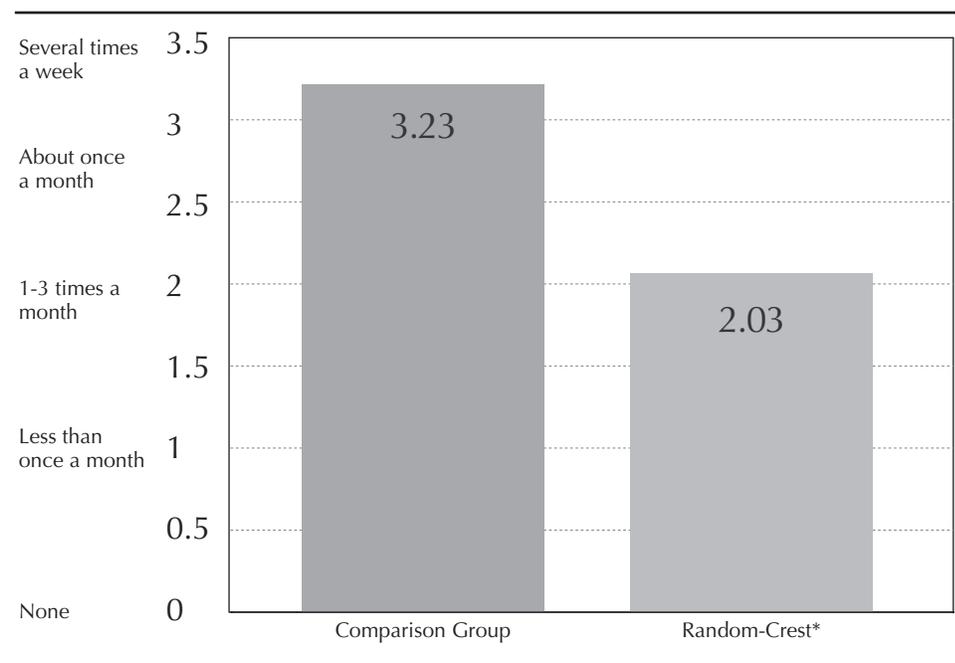
There were also problems with staff attitude because they were constantly faced with a vocal minority of recalcitrant clients not “clinically” selected into treatment. A statement indicative of the treatment staff’s mistrust/confusion about the research was, “Oh, so you don’t intentionally send us the most difficult people!” This came after the random assignment process was explained to CREST staff. In reality, all clients had met criteria of past drug abuse and had volunteered for CREST, though perhaps not with a “motivation for treatment.” However, TC staff had not assessed and selected the clients, so they found it easy to blame the research process for the “recalcitrant” clients.

The important point here is that, because of the random assignment, the project ended up evaluating a TC treatment arrangement that would not likely exist in reality. The purpose of random assignment is to develop equivalent groups so that valid and reliable comparisons of outcome can be made. But, random assignment made the client mix of the RANDOM-CREST group different from that in “real world” TCs. As noted by Stahler et al. (1993:672) in a random assignment study of homeless crack users to different treatment modalities, “... the randomization process may have interfered with the integrity and internal validity of the design by increasing attrition.”

In fact, many studies comparing treatment conditions suggest that client samples based on random designs are different from those selected through traditional recruitment strategies, and randomization may actually change a program. In fact, the research is likely examining an artificial treatment initiative (De Leon 1979; Dennis

FIGURE 2

Frequency of Drug Use 12 Months After Leaving Work Release, Randomized Model



*Significantly different from COMPARISON group, $p < .05$

Note: Predicted scores on frequency of drug use scale controlling for mean scores on age, number of prior arrests, times in prison, number of illegal drugs used frequency of drug use prior to prison, gender, race, and prior treatment.

1994; Scarpitti, Inciardi & Martin 1994; De Leon et al. 1995). This change is evident from the time of client selection and assignment, and these changes may amplify and reify during the course of the research process.

This points to a conceptual problem with the random model in practice. The model assumes that the error of mismatch in random assignment is also randomly distributed—an error which should not bias any of the assigned conditions (modality, program or intervention) toward higher participation or attrition. For example, the initial attrition rate among those mismatched to a treatment program (e.g., CREST) should be proportional or equivalent to

those mismatched by assignment to a no-treatment control group. The evidence from the CREST study suggests that this is not the case.

Even if random selection produces reasonable equivalency of individual differences at the start of the study, participation or attrition in the assigned categories or programs may not be equivalent in their engagement of the assignee, to say nothing about their subsequent influence upon the client. Stahler and colleagues (1993) noted that treatment dropouts often came from the category of clients who felt their assigned program did not meet their treatment or personal needs. In the Delaware study the possible mismatch effect of unmotivated TC clients who are

TABLE 2

Planned Characteristics of Research Groups in the Delaware TC Continuum for Subjects About to be Released From Prison

	Work Release Classified	Past Heavy Drug Use	Random Selection	In-prison TC Graduate	Assigned to work release TC
COMPARISON	yes	yes	yes	no	no
KEY	yes	yes	no	yes	no
RANDOM-CREST	yes	yes	yes	no	yes
NON-RANDOM CREST	yes	yes	no	no	yes
KEY-CREST	yes	yes	no	yes	yes

assigned to CREST (or even select CREST because they think it will help get them out of prison) may lead to no better or worse an outcome than will be found among the “no treatment” group. Thus, the assignment process may be random, but the influence upon the assignee may not be. Since fewer than 60 percent of assignees complete CREST, there is potential for an attrition effect.

To demonstrate the differences in findings and additional information to be gained from a quasi-experimental design (multiple groups resulting from the day-to-day running of the TCs), we repeat the above analyses including not only the random assignment groups but also including naturally occurring treatment groups.

An Example of a “Mixed Mode” Outcome Analysis

As noted earlier, there are five research groups used in these analyses: 1) COMPARISON—those who were placed in the conventional work release setting and received neither prison-based nor community-based TC treatment; 2) KEY, those who received their primary treatment at The KEY but no secondary/tertiary treatment; 3) RANDOM-CREST, those who received their primary and secondary treatment at CREST after being randomly assigned to the program from a pool of work release eligibles; 4) NON-RANDOM-CREST, those who received their primary and secondary treatment at CREST after being sent to the program by normal criminal justice procedures, and 5) KEY-CREST—those who received their primary treatment at The KEY and their secondary/tertiary treatment at CREST.

There are differences in the composition of the research groups: assignment to the COMPARISON or RANDOM-CREST groups was

determined by lot; the COMPARISON and both CREST groups include men and women, while the KEY group does not; the KEY and KEY-CREST groups were KEY “graduates” (suggesting some treatment motivation); both CREST groups included all those who started the program, regardless of how much of the program they completed; and finally, the KEY-only group included clients who graduated before CREST was established. Table 3 shows baseline variables for all five groups included in the quasi-experimental analyses.

The RANDOM-CREST and COMPARISON groups remain very similar. There are, however, significant differences with the other groups. The two KEY groups contain more African-Americans. All of KEY and many of KEY-CREST respondents are male. Everyone from the KEY has had previous treatment. The major differences of interest for the present study are between the RANDOM-CREST and NON-RANDOM-CREST groups. The RANDOM-CREST group scored worse on prior drug use. The NON-RANDOM-CREST group scored worse on criminal history, but the difference was not significant. The NON-RANDOM group was also significantly older, by an average of 2.3 years at baseline. Perhaps the most significant difference is in prior treatment. Seventy-nine percent of the RANDOM group reported prior drug treatment, while only 56 percent of the NON-RANDOM group did so. This may reflect decisions on the part of criminal justice practitioners to route those with no past treatment into the TCs.

The basic hypothesis is still that drug-involved offenders receiving treatment in a TC will be more likely to remain arrest free and be less drug-involved 12 months after work release than those who have not had treatment. And, again, logistic regression is used for the arrest-free analysis, while OLS regression is utilized for the drug use analysis. For each dependent vari-

able, we present full models for all 5 groups that were followed. In all analyses the data are examined in the full regression model using a dummy classification for group, with COMPARISON the excluded category.

Figure 3 shows the predicted probabilities of arrest-free within each group one year after work release. The black bar again represents the results of the COMPARISON group and the white bar the RANDOM CREST GROUP. The results are similar to those shown in Figure 1 for these 2 groups, but it is also clear that more is happening. By utilizing all available data, the gray bars show the stair-step result of each additional phase of treatment. Again, the other significant independent variables in the model are age and previous arrest and prison history.

The analyses reveal that transitional treatment in work release seems more effective than in-prison treatment alone in preventing new arrests. Those who get both prison and transitional treatment (KEY-CREST) are the group that does the best.

The difference between the RANDOM and NON-RANDOM CREST groups is of note. While the randomly assigned group did significantly better than the comparison group, the group assigned to CREST by criminal justice practitioners using their own eligibility criteria did even better than the RANDOM-CREST group. Keeping in mind that the NON-RANDOM group scored worse than the RANDOM group on prior criminal history measures; this finding may indicate that the system does an even better job of selecting clients for treatment than random assignment.

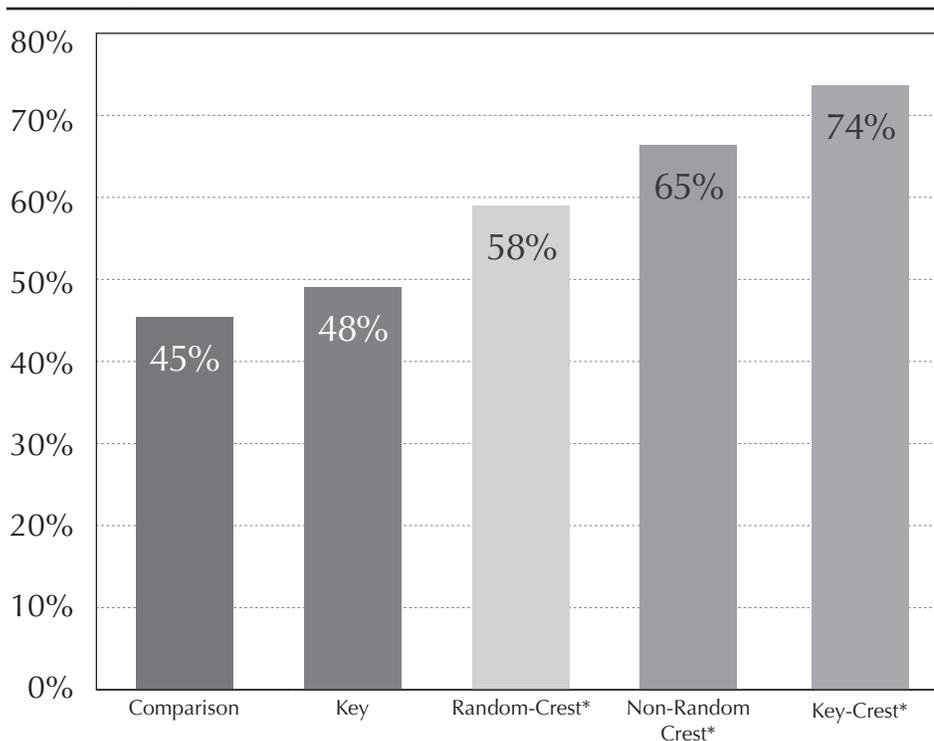
A final regression model analogous to that in Figure 2 above but including the five comparison groups is shown in Figure 4. The same 3 covariates (age, times in prison, and previous drug history) are significant here as well. Also, here again, the effects of treatment are seen in the reduced

TABLE 3

Baseline Sample Characteristics by Group: Delaware Therapeutic Community Continuum

	Total	Comparison	Key	Random Crest	Non-Random Crest	Key/ Crest
N	997	248	40	182	320	207
Age	30.4	29.8	31.7	29.2	31.5	30.6
Number of Arrests	10.5	9.6	11.3	9.7	10.8	11.6
Times in Prison	3.1	3.2	3.2	2.9	3.2	3.1
Illegal Drugs Used	5.2	5.7	5.9	5.8	4.7	4.7
Drug use before prison	4.1	3.9	5.1	4.7	3.7	4.3
Male percent	79	81	100	77	79	76
White percent	24	30	15	25	28	20
Prior Treatment percent	74	75	100	79	56	89
Arrest-free at 12 Months percent	59	43	48	56	65	72

FIGURE 3
Percent Arrest Free 12 Months After Leaving Work Release, Full Group Model



*Significantly different from COMPARISON group, $p < .05$

Note: Predicted probabilities (shown as percents) of arrest-free by group controlling for mean scores on age, number of prior arrests, times in prison, number of illegal drugs used frequency of drug use prior to prison, gender, race, and prior treatment.

frequency of drug use. Those getting transitional treatment do better than those with in-prison treatment alone, while those with both prison and transitional treatment do the best. Both RANDOM CREST and NON-RANDOM CREST groups show a significant reduction in drug use from the COMPARISON group, and the magnitude of the effect is quite similar. This should be noted in the context that the RANDOM CREST group was significantly more drug-involved than NON-RANDOM CREST. The fact that the more drug-involved and less criminally involved RANDOM CREST group did marginally better in reducing drug use and marginally worse in preventing recidivism than the NON-RANDOM CREST group is worth noting. If there was any implicit difference in selection criteria, it would involve an emphasis on drug use in the randomly selected group and an emphasis on criminal history in the system selected group in determining entry into CREST.

Discussion

Numerous outcome analyses from the Delaware project completed thus far have shown significant treatment effects for the TC continuum for periods ranging from 6 months up to 5 years (Mathias

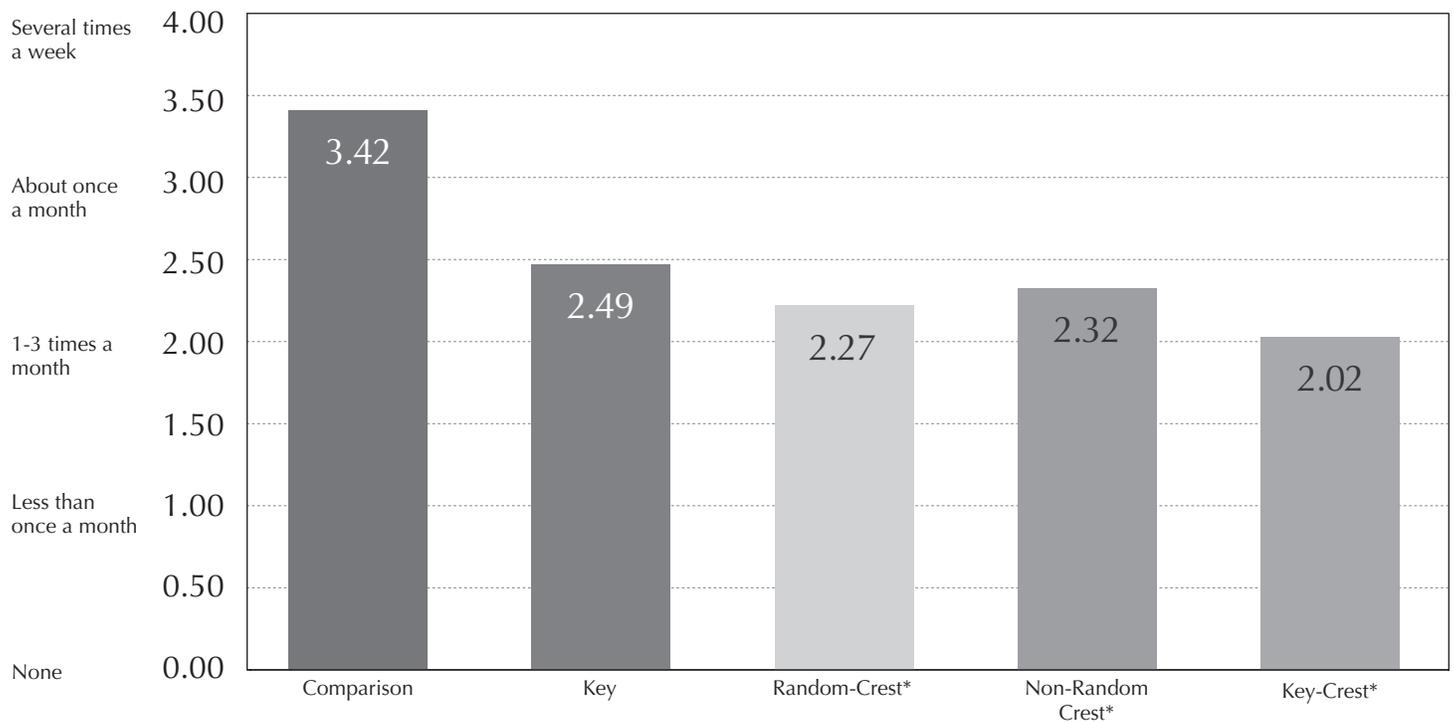
1995; Inciardi et al. 1997, Martin et al. 1999, Inciardi et al. 2003). These analyses have also indirectly revealed something of the limits of randomization and the necessity for other kinds of controls in the analyses. In this paper, we made the comparisons explicit, looking first at the “experimental” groups and subsequently at the naturally occurring groups. Of particular interest is comparing results between the random and non-random treatment groups (RANDOM CREST and NON-RANDOM CREST). The results suggest that randomization alone may not show the best picture of a treatment program’s success, and that clients selected by criminal justice practitioners based on addiction and criminal history criteria beyond work release eligibility perform better than those randomly assigned to CREST.

Client selection for the major “experimental contrast” of the RANDOM-CREST group in this study was based on a random draw from the pool of work release eligible inmates. Yet clinical assessments of readiness and suitability for TC treatment were not used for this group, as is the case in “real world” TCs. In many instances, the RANDOM-CREST admitted clients who, under more typical circumstances, would not have been considered appropriate for a TC.

In the real world of drug abuse treatment, program staff or criminal justice practitioners usually choose the clients they feel are ready for treatment and are appropriate for the particular modality. Random assignment in field settings does not allow for client selection. As a result, clients unready for treatment are assigned to a program, sometimes undermining the effects of treatment and contaminating the treatment environment. Clients who are ready for particular treatments may also be assigned to conditions that are not suitable for them, resulting in attrition or lack of benefits. Consequently, conclusions made about treatment conducted within the context of controlled research may not necessarily apply to treatment conducted with clinically selected and appropriate clients.

De Leon et al. (1995) explicitly examine the dilemmas of conducting research on treatment effectiveness. Federal regulations, real world limitations on accomplishing random case selection, and even the simple knowledge that the program is under study combine to make the circumstances for judging treatment effectiveness elusive and difficult to isolate, describe and quantify. In 2002, new federal guidelines promulgated by the Office of Human Research Protection (OHRB) and interpreted by increasingly vigilant (and even paranoid) local Institutional Review Boards make true “no treatment” control groups unacceptable if there is even the slightest hint that the treatment will be effective (a Catch-22 for the true experiment). Less manipulated research designs may alleviate these problems, but raise new issues about not controlling for the effects of non-manipulated intervening variables. In this paper we used covariate controls. Other more complex controls allowing for more covariates and interactive effects can be accomplished with “propensity score” techniques (D’Agostino 1998). Possible solutions are less intrusive designs with larger samples, replication in different samples, greater emphasis on measuring non-treatment covariates, and assessing a variety of outcome measures—outcome measures that vary in topic (e.g., relapse, other health behaviors, recidivism, employment) and in degree of behavior (e.g., how many ER visits, how often use drugs). An example of using baseline covariates to statistically control for group differences was shown above. Such effectiveness studies, however, require a sufficient number of subjects, the ability to follow subjects over time, and the ability to measure the same variables in different programs and samples.

Overall, our research experience does not call for an abandonment of randomization in treatment research, but a recognition of its limitations. Randomization will not begin to completely “control” for the real differences that will

FIGURE 4*Frequency of Drug Use 12 Months After Leaving Work Release, Full Group Model*

*Significantly different from COMPARISON group, $p < .05$

Note: Predicted scores on frequency of drug use scale controlling for mean scores on age, number of prior arrests, times in prison, number of illegal drugs used frequency of drug use prior to prison, gender, race, and prior treatment.

remain among the comparison groups, both at initial assignment and during the course of the "quasi-experiment." It may create circumstances not directly applicable to the real world of treatment. And sometimes, it may be important to compare effects among groups that have not or cannot be randomly assigned. As demonstrated earlier, reliance on randomization may obscure the need to measure many other factors related to individual differences and to differences in treatment program contact.

References

- Apsler, R. (1991). Evaluating the cost-effectiveness of drug abuse treatment services. In W.S. Cartwright & J.M. Kaple (Eds.), *Economic costs, cost-effectiveness, financing, and community-based drug treatment* (NIDA Research Monograph 113, pp. 57-66). Rockville, MD: National Institute on Drug Abuse.
- Butzin, C.A., Martin, S.S., Inciardi, J.A. (2002). Evaluating component effects of a prison-based treatment continuum. *Journal of Substance Abuse Treatment* 22, 63-69.
- California Department of Drug and Alcohol Programs (1994). *Evaluating recovery services: The California Drug and Alcohol Treatment Assessment* (CALDATA). Sacramento, CA: California Department of Alcohol and Drug Problems.
- Chaiken, M.R. (1989). *In prison programs for drug involved offenders*. Washington, D.C.: Office of Justice Programs, National Institute of Justice.
- D'Agostino, Ralph B. (1998). Propensity score methods for bias reduction in the comparison of a treatment to a non-randomized control group. *Statistics in Medicine* 17, 2265-2281.
- De Leon, G. (1979). *The illusion of control groups in therapeutic community research*. Paper presented at the Twelfth Annual Eagleville Conference, Eagleville, PA.
- De Leon, G., Inciardi, J.A., & Martin, S.S. (1995). Residential drug treatment research: Are conventional control designs appropriate for assessing treatment effectiveness? *Journal of Psychoactive Drugs*, 27, 85-91.
- Dennis, M. L. (1994). Design, management, and analysis of randomly controlled trials in community-based settings. In J.S. Wholey, H. Hatry, and K. Newcomer (Eds.), *Handbook of practical program evaluation* (San Francisco: Jossey-Bass).
- Fourcier, M.W. (1991). Substance abuse, crime and prison-based treatment: Problems and prospects. *Sociological Practice Review* 2(2), 123-131.

- French M.T., Salome H.J., & Carney M. (2002). Using the DATCAP and ASI to estimate the costs and benefits of residential addiction treatment in the State of Washington. *Social Science and Medicine* 55:2267-2282.
- Gaes, G.G. (1998) Correctional Treatment. In Tonry, M. (Ed.) *The Handbook of Crime and Punishment*. (New York, Oxford University Press.)
- Geas, G.G., Flanagan, T.J., Motiuk, L.L., & Stewart, L. (1999). Adult Correctional Treatment. In Tonry, M., and Petersilia (Eds.), *Crime and Justice: A Review of Research Volume 26*. Chicago, University of Chicago Press.
- Harwood, H.J., Napolitano, D.M., Kristianses, P., & Collins, J.J. (1984) . *Economic costs to society of alcohol and drug abuse and mental illness*. Research Triangle Park, NC: Research Triangle Institute.
- Harwood, H.J., Fountain, D., & Livermore, G. (1998). *The economic costs of alcohol and drug abuse in the United States, 1992* (98-4327). Rockville: National Institute on Drug Abuse and National Institute on Alcohol Abuse and Alcoholism.
- Holland, S. (1978). Gateway houses: Effectiveness of treatment on criminal behavior. *International Journal of the Addictions* 13, 369-381.
- Hubbard, R.L, Marsden, M.E., Rachal, J.C., Harwood, H.J., Cavanaugh, E.R., & Ginzburg, H.M. (1989). *Drug abuse treatment: A national study of effectiveness*. Chapel Hill, NC: University of North Carolina Press.
- Inciardi, J.A. (1993). *Criminal justice*. Fort Worth: Harcourt Brace.
- Inciardi, J.A. (Ed) (1993b) SAGE *Criminal justice annuals, Volume 27: Drug treatment and criminal justice*. Newbury Park-SAGE.
- Inciardi, J.A., Lockwood, D. & Martin, S.S. (1991). Therapeutic communities in corrections and work release: Some clinical and policy considerations. Paper presented at National Institute on Drug Abuse Technical Review Meeting on Therapeutic Community Treatment Research, May 16-17, Bethesda, MD.
- Inciardi, J.A., Lockwood, D., & Martin, S.S. (1994). Therapeutic communities in corrections and work release: Some clinical and policy implications. In F.M. Tims, G. De Leon, and N. Jainchill (Eds.), *Therapeutic community: Advances in research and application* (NIDA Research Monograph 144, pp. 259-267). Rockville, MD: National Institute on Drug Abuse.
- Inciardi, J.A., Martin, S.S., Butzin, C.A., Hooper, R.M., & Harrison, L.D. (1997). An effective model of prison-based treatment for drug-involved offenders. *Journal of Drug Issues* 2, 261-278.
- Inciardi, J.A., Martin, S.S., Butzin, C.A. (2003) Five-year outcomes of therapeutic community treatment of drug involved offenders after release from prison. *Crime and Delinquency*, in press.
- Leukefeld, C.G., & Tims, F.M. (Eds.) (1988a). *Compulsory treatment of drug abuse: Research and clinical practice* (NIDA Research Monograph 86). Rockville, MD: National Institute on Drug Abuse.
- Martin, S.S., Butzin, C.A., & Inciardi, J.A. (1995). Assessment of a multistage therapeutic community for drug involved offenders. *Journal of Psychoactive Drugs* 27, 109-116.
- Martin, S.S., Butzin, C.A., Saum, C.A., & Inciardi, J.A. (1999) Three year outcomes of therapeutic community treatment for drug-involved offenders in Delaware: from prison to work release to aftercare. *The Prison Journal*. 79, 294-320.
- Mathias, R. (1995). Community treatment helps offenders stay drug and alcohol free. *NIDA Notes* (May/June). Rockville, MD: National Institute on Drug Abuse.
- Office of Applied Studies (1998). Substance abuse and mental health services administration, Uniform Facility Data Set (UFDS) survey, October 1. URL: <http://dasis3.samhsa.gov/99ufds/resource-559/t38.htm>.
- Prendergast, M. L., Podus, D., Chang, E., Urada, D. (2002). The effectiveness of drug abuse treatment: a meta-analysis of comparison group studies. *Drug and Alcohol Dependence* 67, 53-72
- Rice, D.P., Kelman, S., Miller, L.S. & Dunmeyer, S. (1990). The economic costs of alcohol and drug abuse and mental illness: 1985. Report submitted to the Office of Financing and Coverage Policy of the Alcohol, Drug Abuse, and Mental Health Administration. U.S. Department of Health and Human Services. San Francisco: Institute for Health and Aging.
- Rockholz, P.B. (2000). Findings of a national survey on therapeutic communities for substance abusing offenders in state prison. *Association of State Correctional Administrators Newsletter*, Middletown CT.
- Rouse, J.J. (1991). Evaluation research on prison based drug treatment programs and some policy implications. *The International Journal of the Addictions* 26, 29-44.
- Scarpitti, F.R., Inciardi, J.A., & Martin, S.S. (1994). Assertive community treatment: Obstacles to implementation. In B.W. Fletcher, J.A. Inciardi and A.M. Horton, Jr. (Eds.), *Drug abuse treatment: The implementation of innovative approaches* (pp. 63-78). Westport, CT: Greenwood Press.
- Simpson, D.D., Wexler, H.K., & Inciardi, J.A. (1999) Drug treatment outcomes for correctional settings, Part 1; Introduction. *The Prison Journal* 79.
- Smith, R. (1977). *Drug programs in correctional institutions*. Washington, DC: Law Enforcement Assistance Administration.
- Stahler, G.J., Cohen, E., Shipley, T.E., & Bartlett D. (1993). Why clients drop out of treatment: Ethnographic perspectives on treatment attrition among homeless male 'crack' cocaine users. *Contemporary Drug Problems* 20, 651-680.
- Wexler, H.K. (1995). The success of therapeutic communities for substance abusers in American prisons. *Journal of Psychoactive Drugs* 27, 57-66.
- Wexler, H.K., De Leon, G., Thomas, G., Kressel, D., & Peters, J. (1999). The Amity prison TC evaluation—reincarceration outcomes. *Criminal Justice and Behavior* 26, 147-167.

Moving Towards a Federal Criminal Justice "System"

*Timothy P. Cadigan, Office of Probation
and Pretrial Services*

Administrative Office of the U.S. Courts

*Bernadette Pelissier, Office of Research and Evaluation
Federal Bureau of Prisons*

THE RECENT LITERATURE has been replete with discussions of the need to move the disparate agencies of the criminal justice system into a "systems" model. Taxman and Bouffard 2000 specifically argue that if criminal justice organizations want to improve the successful outcome of treatment services, they need to focus on the shortcomings of current methodologies of providing those services rather than focusing on the "lack of motivation" of the offenders they treat. They propose that criminal justice organizations should become "boundaryless organizations":

Boundaryless organizations are characterized by shared interagency goals and operational practices at key decision points that are common to both criminal justice and treatment agencies. This approach emphasizes the creation of policies and operational practices that transcend agency boundaries, overcome bureaucratic turf issues, and develop processes that benefit individual agencies.¹

To achieve such worthwhile ideals, organizations must undergo a paradigm shift in which policies are designed to impact the end product or outcome of the case rather than a particular organization's performance in handling that case or that organization's outcomes as a whole.

Toward this goal, the focus is then on the new criteria of responsiveness to the system and community needs, flexibility (e.g., pulling tasks together to achieve greater gains), and innovations (e.g. new, different, and creative approaches to traditional processes). The boundary-spanning concept involves simultaneous processing of tasks and multi-agency efforts instead of on separate decision points for each agency. The convergence increases flexibility and innovation by focusing on the decisionmaking process instead of on specialized tasks. In the criminal justice system, boundaryless organization allows for multi-agency decisionmaking before the next decision point occurs. The emphasis is on the process to allow the organizational structure to mirror the way work/cases actually flow.²

These goals and approaches are lofty ideals for any organization, which could only be achieved with years of continued management commitment and support. For the federal criminal justice system to achieve them would likely take years, if not decades, of modification and refinement within a framework of cooperation, management commitment and trust. However, the federal system has several ongoing initiatives that are likely to lead it in this direction. Those initiatives include the BOP's inmate skills development workgroup, AOUSC's reentry initiative, and the new AOUSC community supervision monograph. In preparation or anticipation of such a potential future, a small low-level approach has been ongoing between the organizations.

The authors of this article approach the "systems" model from their respective positions in

the Office of Research and Evaluation of the Federal Bureau of Prisons (BOP) and the Office of Probation and Pretrial Services of the Administrative Office of the U.S. Courts. Working in conjunction with their superiors and support staff, we have developed data analysis vehicles to document the potential benefit of such an approach in the federal system. Beginning with the development and signing of a joint Memorandum of Understanding (MOU) in December 2000 to share data for research purposes, staff members began the process of achieving those goals. This article explores the process undertaken, considers the many issues which arose, describes the solutions to those issues that were implemented, and describes the future of this collaboration. Ultimately, it also considers the many hurdles to be overcome should the agencies hope to achieve the broader range goals identified.

Brief Introduction to the Federal Criminal Justice System

An individual's experience with the federal criminal justice system begins with cases investigated by a variety of law enforcement agencies, including the Federal Bureau of Investigation and Drug Enforcement Administration. Those agencies bring charges in federal court and the federal probation and pretrial services system begins its role with a pretrial services investigation to assist the judicial officer in determining pretrial release and providing pretrial services supervision, if ordered. Should the defendant be detained,

¹Taxman, Faye S. and Bouffard, Jeffery A., "The Importance of Systems in Improving Offender Outcomes: New Frontiers in Treatment Integrity," *Justice Research and Policy* 37 (Fall 2000) at 39.

²Ibid at 41.

pending the resolution of the charges, the defendant might have his/her first contact with the BOP by serving that detention period in a BOP facility. If the defendant is ultimately convicted, a presentence investigation is prepared by a probation officer who also provides any post-conviction supervision that may be ordered as part of the sentence. Finally, should the offender be sentenced to a term of incarceration, that term would be served in a BOP facility. Given that the defendant/offender must move between the BOP and AOUSC subsystems at various points in the process, the potential benefits of a "systems" approach appear to be obvious.

The BOP and AOUSC provide substance abuse treatment to defendants and offenders in need of such services. The basic goals of the AOUSC Federal Substance Abuse Treatment Program are the identification of substance abusing offenders and the provision of treatment for those identified. Through close supervision of offenders and quick intervention in response to drug and alcohol abuse, the Substance Abuse Treatment Program is designed as a tool for the probation officer to use to protect the community. The program is considered an effective and economical community corrections alternative for the courts, although there is little hard evidence beyond the anecdotal to support that contention. With the availability of specialized services and the additional supervision and urine surveillance provided by the program, courts can consider restricted release in the community in place of a more costly incarceration alternative.

Drug treatment, as defined at 18 U.S.C. § 4251, "... includes but is not limited to medical, educational, social, psychological and vocational services, corrective and preventive guidance and training, and other rehabilitative services designed to protect the public and benefit the addict by eliminating his dependency on addicting drugs or by controlling his dependence and susceptibility to addiction." Authorized services for substance abusing federal offenders include—but are not limited to—urinalysis, counseling, vocational testing, training, and placement, physical examinations, psychological and psychiatric evaluations and treatment, outpatient and inpatient detoxification, short- and long-term residential treatment, temporary housing, emergency transportation and financial assistance, and travel by contract staff to visit clients. Treatment services are provided by probation staff through available community programs at no additional cost to the government, and by over 2,800 treatment programs under contract to the United States Courts. Contracts are awarded through a competitive process.

The Federal Bureau of Prisons has provided drug abuse treatment in various forms for decades. Since the passage of the Anti-Drug Abuse Acts of 1986 and 1988, both of which included an increased emphasis on and resources for drug abuse treatment, the Bureau has redesigned its treatment programs. With the help of the National Institute on Drug Abuse (NIDA) and after careful review of drug abuse treatment programs around the country, the Bureau has developed a drug abuse treatment strategy that incorporates those "proven effective" elements found through this review. The Bureau's strategy addresses inmate drug disorders by attempting to identify, confront, and alter the attitudes, values, and thinking patterns that lead to criminal and drug-using behavior.

The primary BOP treatment programs are residential drug abuse treatment and transitional drug abuse treatment. There are 50 residential programs which provide intensive treatment five days a week and last typically about nine months. During that time the inmate receives a minimum of 500 hours of treatment. Transitional drug abuse treatment is provided in a halfway house and includes an essential transitional component that keeps inmates engaged in treatment as they return to their home communities.

The Process

Staff from both organizations began with the simple idea that research on the effectiveness of our substance abuse programs would be more complete and effective if we each considered the impact of the other organization's treatment on our various populations. Toward that goal, a memorandum of understanding was drafted, reviewed by both organizations and ultimately approved. With the MOU in place, staff met to work out the details and begin the process of making the combined assessment a reality. One of the first goals was to link complete databases, not just specific populations or subsets of databases. While this proved to be a somewhat arduous process, once implemented we felt that the benefits could be reaped for years to come. To do so required linking the operational data systems used by both organizations, National Treatment Database (NTD) at the Administrative Office and SENTRY at the Bureau of Prisons.

The National Treatment Database (NTD) at the Administrative Office is compiled through quarterly data extractions from the Probation and Pretrial Services Automated Case Tracking System (PACTS) in the 93 probation and pretrial services offices nationwide. The system has all the basic information on defendants and offenders in the federal probation and pretrial services system, including demographics, investigations, sentences,

supervision activities and violation information.

SENTRY is the on-line information system used by the Bureau of Prisons (BOP) to provide most of its operational and management information requirements. (SENTRY is not an acronym, but is the generic name of the system.) The SENTRY system is under the direct management control of the BOP, and its primary function is to track inmates. SENTRY contains a wealth of data on defendants who have been in the custody of BOP, including demographics, treatment provided, infractions, sentence, and related offender information.

For a variety of reasons, the team decided to select a cohort of persons released from the BOP to the federal probation system during calendar year 1999. The initial concept was relatively straightforward: Each organization would extract either persons released or persons received from their respective databases, and those datasets would be matched to form the 1999 cohort. That relatively simple concept proved somewhat difficult to accomplish, because both organizations relied on different variables as key fields. The BOP utilizes an internally assigned number, known as Register Number, as the primary tracking number in SENTRY, while the AOUSC utilizes an internally assigned number, known as case number, as the primary tracking number in NTD. Given that the data systems rely on different key identifiers, a mutually effective system of matching had to be developed.

Ultimately a combination of key identifiers was utilized. That combination began with the FBI number, which matched 91 percent of the records and incorporated date of birth, social security number, sex, and race to ultimately match 98 percent of the offenders released by BOP who were received by AOUSC. That rate was deemed acceptable by the team for purposes of this initiative, but would need to be enhanced for any subsequent operational methodology that might ultimately be used for all cases.

Outcomes

While the team plans to do formal research on this dataset in the coming year, a number of initial outcomes have already resulted from the effort. The team successfully matched the records of 27,386 offenders released from the BOP during 1999, creating the largest and most complete picture of offenders who have passed through both subsystems that has ever been assembled. Specifically, this dataset contains detailed substance abuse treatment information not previously assembled across agencies. Given the interaction and interdependence of the two subsystems, to look at outcomes or performance measures for only one of them without considering or controlling for the

impact of the other subsystem seems myopic at best. It is hoped that any future research performed by either organization will now routinely consider and account for these issues.

The importance of data quality cannot be overstated. Both SENTRY and NTD have data quality issues that have to be addressed. Those issues vary, but by matching the two datasets, we were able to identify data quality issues which had not been previously identified. Therefore, the initiative itself enhanced the quality of the data in both organizations.

The relationships spawned by this small initiative have grown and are facilitating meetings and data exchanges that will lead to operational changes benefiting both organizations. There are ongoing meetings between these organizations and the U.S. Sentencing Commission that will lead to electronic data exchange at an operational level. While those meetings were developed in response to a wide range of factors, the underlying relationship has provided both agencies with staff members who understand the systems of the sister agency and—more important—how those systems can be utilized to achieve operational efficiency and a more effective federal criminal justice “system.”

Future Research Questions

The primary research questions that drove this initiative will be addressed in the coming year. Initially they were primarily based on determining the impact or lack of impact that the various substance abuse treatment programs each agency provides had on each other. Those questions have significant policy implications. For example, given the financial commitment the federal government makes by putting someone into the BOP’s 500-hour treatment program, should those offenders, as a matter of policy, be provided additional substance abuse treatment upon their release? Initial results show a clear lack of policy in this area in the federal probation system. Of the 3,039 offenders matched who received the BOP program prior to their release, fully 1,349 received no government-paid treatment while on supervision, while 1,690 received such treatment. Breaking it out by district, 17 districts provided no paid treatment to 65 percent or more of the offenders, while 30 provided paid treatment to 65 percent or more and 46 districts were split relatively evenly. The research should enable us to provide clearer policy guidance to districts on how to handle these cases in the future.

Two populations that emerge from the initial results as warranting further study are the BOP-

identified “failures” from the 500-hour treatment program and the transitional services treatment program. For the 500-hour program, 473 offenders emerged as “failures”; of these, the AOUSC subsequently provided paid treatment to 329 while providing no paid treatment to 144. For the transitional services program, 231 were labeled as “failures” and the courts paid to treat 143 while 88 received no paid treatment. Obviously, the outcomes of these cases are important, but understanding the process that led to significantly disparate handling of these cases could offer important policy guidance for the future.

Once these and other important questions have been answered in the area of substance abuse treatment, equally important and similar questions can be addressed concerning mental health and sex offender treatment. Guidance in formulating effective reentry programs and developing more effective solutions to reduce the number of revocations can be developed from the data. Offenders who subsequently violate the terms of their supervision and ultimately return to the BOP, especially those who do so for only a short time, are very costly. By combining our knowledge base, we should be able to develop more effective methodologies for handling those cases. In fact, almost any problem we face in the future should become easier to manage by having a clear picture of our joint experience with similar problems in the past.

Reorganizing Care for the Substance Using Offender—The Case for Collaboration

Peter J. Delany, D.S.W.

National Institute on Drug Abuse, Bethesda, MD.

Bennett W. Fletcher, Ph.D.

The National Institute on Drug Abuse

Joseph J. Shields, Ph.D.

Catholic University of America, Washington, D.C.

THE INTERSECTION between drug abuse and crime has been well documented. Drug and alcohol abuse are associated with large numbers of criminal acts. The response to drug-related crime has incorporated both public health (drug abuse treatment) and public safety (criminalization of illicit drug possession and sales, zero tolerance laws, stiff penalties for drug-involved offenses, and close monitoring of illicit drug use by those released to continuing criminal justice supervision in the community). As a consequence of the major emphasis on criminalization of drug use over the past three decades, it is estimated that about three-fourths of the offenders in correctional institutions have substance use disorders (SUD). Since most offenders are released to return to their communities, the numbers of individuals with SUD who have past or current criminal justice involvement has also grown (BJS, 1998; Belenko and Peugh, 1999; Mumola, 1999). This growth, together with experience showing that the substance-abusing offender is likely to relapse without drug treatment, has kindled interest in improving access to drug treatment programming for incarcerated offenders, those returning to the community, and offenders under community supervision.

Research on drug abuse treatment indicates that structured behavioral and multi-modal treatment approaches can reduce drug use and recidivism and improve post-incarceration outcomes, especially when paired with post-incarceration treatment and support services

(Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Falkin, Wexler, and Lipton, 1992; Hiller, Knight, and Simpson, 1999; Hiller, Knight, Broome, and Simpson, 1996; Inciardi, Martin, Butzin, Hooper, and Harrison, 1997; Gendreau, 1996; Lipton, 1995; Pelissier & McCarthy, 1992; Peters & Steinberg, 2000; Sherman, Gottfredson, MacKenzie, Eck, Reuter, and Bushway, 1997). Less well understood is how public safety and public health systems should be organized to work together to provide critical continuity of care across systems for these individuals who have multiple problems that require access to multiple health, social service, and criminal justice systems to successfully re-integrate into the community. The dearth of research-based knowledge has not stopped many criminal justice and community treatment agencies from developing their own models of service integration to address the problems that offenders present to the community, either within the institution or at large. Though the assumptions as to the nature of the problem may differ, there appears to be basic agreement that the current response is inadequate, as we expect to release approximately 600,000 offenders back into the community each year for the foreseeable future (Travis, 2002), many of whom have significant untreated substance abuse problems.

The aim of this paper is two-fold. First we propose to build on the emerging research suggesting that drug dependence is a long-lasting disorder with many aspects of a chronic condition.

Second, we propose to highlight a continuum of collaborative structures that policy-makers and practitioners may want to consider as they begin to develop strategies aimed at integrating both across (horizontally) and within (vertically) the multiple systems involved with managing the criminal justice-involved substance user.

Addiction as a Chronic Condition

The persistence of drug addiction has been observed for many years; however, the basic neuroscience needed to understand the nature of the disorder has only been carried out in the past decade. A substantial and growing body of research identifies drug dependence as a complex, multi-layered disorder that affects the brain and behavior in long-lasting ways. Research conducted in both animals and humans shows that drugs produce neurological changes that persist long after the individual has stopped drug use (NIDA, 1999). These changes may help to explain why an individual addicted to drugs is likely to relapse even after long periods of abstinence. Studies comparing chronic disorders such as diabetes, asthma, and hypertension find that these medical conditions reoccur at rates similar to drug addiction relapse (McLellan, Lewis, O'Brien and Kleber, 2000).

An implication of this emerging concept of the addictive disorder is that the effectiveness of drug abuse treatment should not be based on the

outcome of a single episode of care, but rather on whether the treatment continues to be provided as needed over the course of the disorder. Long-term treatment may be required before the individual can alter behavior and thinking patterns associated with drug use, and the social and behavioral consequences of drug use may take even longer to resolve. We must place more emphasis on developing treatment models that more closely match the drug disorder and that meet the needs of the individual patient.

A drug abuse treatment model designed to address the chronic nature of the drug dependence disorder would not be limited to primary intervention but would include ongoing monitoring and support to enhance treatment adherence over the long term (McLellan et al., 2000). Such a treatment approach also has important implications for criminal justice supervision. Greater effort should be given to developing sustainable linkages across systems to meet the complex social, behavioral, and physical health needs of offenders with SUDs, and to creating better models for integrating monitoring and service delivery components that are necessary to achieve long-term changes.

The Need for Collaboration

It has been estimated that nearly 70 percent of state prisoners and over half of federal prisoners have drug or alcohol problems (Mumola, 1999). Further, data from the National Household Survey on Drug Abuse (SAMHSA, 2002) suggests that an estimated 21 percent of the 1.4 million adults who reported that they were on parole or some other form of community supervision were using illicit drugs. Many of these offenders have histories of physical or sexual trauma, or a current lifestyle that increases exposure to violence. Drug addiction also increases the offender's vulnerability to infectious diseases such as HIV/AIDS, tuberculosis, and hepatitis as well as physical and sexual trauma. In addition, many offenders have dysfunctional social relationships, deficits in education, social supports, and employment skills, physical or mental health problems, and criminal thinking habits that jeopardize successful community re-entry. Because the number and complexity of these problems can be overwhelming, many offenders with SUD will need substantial support to access necessary social and health services in the community over an extended period of time (Anno, 1991; Belenko and Peugh, 1999; McDonald, 1995; Wexler, Lipton & Johnson, 1988). These multiple-disordered individuals are often unprepared to take responsibility for managing their behavioral and health conditions for significant periods of time. Without some level of collabora-

tion among agencies, the odds of relapse and recidivism, which often leads to repeated institutionalization, are high (Delany, Shields, and Fletcher, 2003).

Even with the expansion of treatment across the criminal justice system during the 1990s (Prendergast and Burdon, 2002), only a minority who need treatment receive care while under supervision. This is especially true of incarcerated populations. In a study by Belenko and Peugh (1999), only 13 percent of inmates with a need for treatment were receiving some form of help, which ranged from drug education programs, group or individual counseling, and self-help groups, to intensive therapeutic community programming. As a result, most prisoners will be released back to the community without having received treatment for their substance use (Travis, 2000), and without linkage to treatment in the community. These numbers threaten to overwhelm already stressed community correctional and treatment systems.

Since offenders with substance use disorders present such complex clinical and management issues both for correctional and drug abuse treatment staff, it is reasonable to propose that the best outcomes would result from a collaboration between public safety and public health professionals. The reality is that often there is little coordination between criminal justice and drug abuse treatment personnel. The correctional officer may recommend that the re-entering offender should get drug treatment, but have no direct communication with the treatment provider. This places the burden of reconciling competing system demands (e.g., criminal justice appointments, drug treatment, employment, medical/ psychiatric care, and other services) on the offender, who may be overwhelmed by the multiple requirements and choose to address the most pressing need (such as housing or employment) and neglect others. Eventually these other problems can re-emerge and result in re-entry failure.

How can drug abuse treatment and criminal justice agencies work together more effectively to improve the outcomes of offenders with substance use disorders? There are several strategies that might be implemented. The easiest is for the correctional officer and the drug abuse treatment provider to establish an informal network to communicate, share information in their respective areas of expertise, and support their common objectives. A somewhat higher level of coordination might add regularly scheduled as well as informal communication and coordination of treatment services with supervision activities and requirements. A further level of cooperation could employ formalized agreements, some sharing of

resources and activities (e.g., cross-training of staff), and joint goal setting. Higher levels of integration are possible with the merger or oversight of missions, goals, and administrative functions (Konrad, 1996).

Developing a Strategy for Integrating Systems

Prendergast and Burdon (2002) imply that the last decade of efforts to introduce and sustain rehabilitative programs across the criminal justice system has led de facto to new systems of care that have more or less effectively worked to provide a better system of care for the SUD offender. To some extent this is correct, but, as they note, there are numerous factors that mitigate against stakeholder organizations developing collaborative linkages that help ensure continuity of care across programs and systems. To be sure, the growth in the population of offenders with SUD provides tremendous challenges for these fragmented systems as they seek to unify aspects of their systems to create a more coherent strategy. Charles McClintock's (1998) recent summary report on cross-agency collaboration provides a useful outline for thinking about how we can learn from current research and practice experience. Drawing from the work of Schor (1997), Konrad (1996) and Himmelman (1997), he conceptualizes a theory of collaboration in terms of structures, implementation requirements, underlying mechanisms, services linkages, and success requirements. For the purposes of our discussion, we will focus on the continuum of structures for building collaborative linkages, both vertically and horizontally, and key components of collaborative efforts (Konrad, 1996; Prendergast and Burdon, 2002). Finally, we will consider the need for evaluation in the collaborative process.

Collaborative Structures

Collaborative structures vary in both form and level of commitment and may be more or less useful in achieving the goal of a systems integration depending on the level of formality. Konrad (1996) identified five strategies along a continuum, including networking, coordinating, cooperating, consolidating, and integrating.

Networking

Networking stresses information sharing and support for common goals. This often occurs informally within and across systems but may be more problematic in organizations where one organization, usually criminal justice, appears to hold a superordinate position (Prendergast and

Burdon, 2002). Practitioners may feel constrained to protect information in order to maintain the integrity of the process. Creating the necessary trust may occur only after management in both organizations take steps to develop a common understanding of each other's goals and contributions to working with the SUD offender/patient and openly share expectations with staff below them. A formal framework for information sharing and opportunities for contact may also assist in this process.

Coordination

Coordination between organizations usually requires a little more effort in terms of synchronizing parts of each system to minimize barriers that hinder access to care. For example, probation and treatment supervisors may work together to coordinate the assignment of offenders to agency staff who maintain similar work schedules. This may make it easier for all stakeholders (offender, probation officer, and treatment practitioner) to meet regularly to discuss progress and minimize extra travel requirements on the offender who often has a fairly chaotic adjustment period during early recovery. This still requires little, if any, loss of autonomy, but will probably require a greater level of horizontal integration for mid-level managers.

Cooperation

Cooperative strategies assume most of the activities of networking and coordination but also require some sharing of resources and integration of activities. One such model is the co-location of drug treatment counselors in a community pre-release center. This would require formalized agreements between corrections and the community treatment program in terms of obtaining space and time to provide services, protection of records, as well as limits of confidentiality. It would also require the pre-release center to provide training to the counselors in the policies and procedures of the pre-release center and to identify how the counselor fits within the organization. An important consideration here is for each organization to give consideration to clearly delineating how counseling staff will participate in pre-release center activities such as treatment planning, staffing and supervisory meetings, and professional development.

Consolidation

McClintock (1998) notes that this level of collaboration requires substantial structural change. Often administrative and management struc-

tures may be merged while the functional units maintain line authority to provide services. DWI programs that were established during the 1980s incorporating probation and treatment under one roof are one example of consolidation. There was a program director with overall responsibility for management of the agency and separate managers for the probation and treatment units. There were common goals, a high degree of information sharing, and agency-wide job descriptions and staff training.

Integration

An integrated system of care is the complete merger of organizational components. Not only are administrative and management tasks shared, but staff also share a common process for achieving outreach, intake, and treatment and management. Such an approach may work best in rural settings where the resources are not great enough to provide for separation between probation and treatment, so a decision is made to hire clinicians and train them as probation officers. Though a possibility for role conflict exists, good training and supervision can help staff develop very strong integrated discharge plans that lay positive and negative sanctions for the SUD offender.

For the most part, community corrections and drug treatment will not achieve full integration, or even consolidation. However, careful attention to resources and setting mutual goals can help create opportunities for building new alliances. Achieving these new alliances requires not only a realignment of resources, but also thoughtful planning that can build trust over time so that the inevitable turf battles are minimized.

Key Components

A number of key components that have been cited above must be considered as collaborative enterprises are entered into. Probably one of the most important elements is the setting of goals for the collaborative effort. McClintock (1998) notes that attention must be paid to short-term, intermediate, and long-term goals. These should take into account the nature of addiction, other diagnoses, and behavioral issues including criminal lifestyles. Goals should be clearly specified in terms of stakeholder interest and how they will be measured over time. This leads to the next element that must be taken into consideration, the stakeholders. These include the SUD offender, the practitioner, program administrative staff, local and state policy makers, and community leaders. How they are to be included in the planning, delivery and evaluation of the collabora-

tive effort (Konrad, 1996) is critical. Otherwise, the effort can easily be undermined.

Another important element is the need for formalization of procedures and sharing of resources—financial, personnel, and other. Does this collaborative enterprise require changes in program level policies and regulations or is legislation necessary to allow for sharing of staff and resources? Can “circuit breakers” (McClintock, 1998) be built in to allow stakeholders to maintain autonomy?

In terms of the service delivery system, which elements will be shared and which will remain separate? Will there be common information systems, use of instrumentation, staff? How will the offender's family be involved? The community? Will there be joint staffing and training? Where will the services be housed?

Finally, how will information be shared within and across systems? This becomes especially important as the offender moves from one level of care or supervision to another. Without a comprehensive plan for information management, it is likely that valuable time and effort will be lost as each transition becomes just one more disconnected episode. Further, the ability to monitor progress can be hampered when systems require duplication of effort of data collection, losing valuable historical data that can guide services.

Evaluation

Evaluation of collaborative enterprises is key to understanding both their operation and impact and in the end, it is necessary if it is to maintain the support of stakeholders (McClintock, 1998; Prendergast and Burdon, 2002). Both process and performance outcome evaluations are helpful. Process evaluations can help assess the structural strategies, inclusion of key elements, and impact of linkages across and within systems. Performance-based evaluations are necessary to demonstrate to stakeholders that progress is being made and thus, that the collaboration is worthy of continued financial support. However, before any evaluation is implemented, it is essential to clearly define what is meant by success and whether it is a short-term, intermediate, or long-term goal. Defining success only as abstinence, stable employment and housing may have little practical value for an offender who has been using illicit substances for 12 years and is completing his or her first formal treatment effort. If the offender achieves abstinence but dies of AIDS-related illnesses because his AIDS was not addressed by the service system, is this success? These difficulties highlight the need for stakeholders to work closely together to identify achievable, measurable outcomes that respond to the needs of the different stakeholder constituencies. It also highlights the need to develop a rich

dataset that includes both quantitative and qualitative information that can provide context to any measures of outcome.

Conclusion

Substance abuse among populations involved with the criminal justice system is a serious problem that requires both a public health and public safety response. Over the last decade, both systems have worked to expand sustainable programming to meet the multiple and complex needs of this population. However, the policies of criminalization over the past three decades have led to a crisis for the public health, public safety and allied health and social services systems. It is apparent that although treatment paired with continued supervision in the community can reduce drug use, and criminal behavior and improve social functioning, there remains a dearth of research to guide these systems in the development of collaborative efforts. Despite the trend towards increased systems collaboration, we will need to draw on the small but growing knowledge base in related human service delivery fields in order to develop strong conceptual and research models that can help define more clearly how these systems can more effectively work together to deliver care to these individuals with long-term needs.

References

- Andrews, D.A., Zinger, I, Hoge, R.D., Bonta, J., Gendreau, P., & Cullen, F.T. (1990). *Does treatment work? A clinically relevant and psychologically informed meta-analysis*. *Criminology*, 28, 369-404.
- Anno, J. *Prison Health Care: Guidelines for the Management of an Adequate Delivery System*. Washington, D.C.: U.S. Department of Justice, National Institute of Corrections, National Commission on Correctional Health Care.
- Belenko, S., Peugh, J. (1999). *Behind bars: substance abuse and America's prison population, Technical report*, New York, NY: National Center on Addiction and Substance Abuse.
- Bureau of Justice Statistics (1998). *Sourcebook of criminal justice statistics*. Washington, D.C.: U.S. Department of Justice.
- Delany, P., Shields, J. & Fletcher, B. (2003). Special Issues in Treatment: Incarcerated Populations, in A.W. Graham, T.K. Schultz, M.F. Mayo-Smith, R.K. Ries, & B.B. Wilford, (eds.), *Principles of Addiction Medicine*, 3rd Edition. Chevy Chase, MD., American Society of Addiction Medicine, 553-565.
- Falkin, G.P., Wexler, H.K. & Lipton, D.S. (1992). Drug treatment in state prisons, in *Extent and adequacy of insurance coverage for substance abuse services (Institute of Medicine Report: Treating drug problems Vol. II)*, NIDA Services Research Series No. 3, Washington, D.C.: Supt of Docs., U.S. Govt. Print. Off.
- Fletcher, B.W. (in press). The NIDA Criminal Justice Drug Abuse Treatment Studies (CJ-DATS), *Offender Substance Abuse*.
- Gendreau, P. (1996) The principles of effective intervention with offenders. In A. Harland (Ed.), *Choosing Correctional Options that Work*. Newbury Park, CA: Sage Publications.
- Hiller, M.L., Knight, K., Broome, K.M., & Simpson, D.D. (1996). Compulsory community-based substance abuse treatment and the mentally ill criminal offender. *The Prison Journal*, 76, 180-191.
- Hiller, M. L., Knight, K., & Simpson, D.D. (1999), Prison-based substance abuse treatment, residential aftercare and recidivism. *Addiction*, 94, 833-842.
- Himmelman, A.T. (1997). *Collaboration for a change: Definitions, models, roles and a guide to collaborative processes*. Paper presented at the New York State Department of Health Conference—Focusing the Message. Albany, New York.
- Inciardi, J.A., Martin, S.S., Butzin, C.A. Hooper, R.M., & Harrison, L.D. (1997). An effective model of prison-based treatment for drug-involved offenders. *Journal of Drug Issues*, 27(2), 261-278.
- Konrad, E. (1996). A multidimensional framework for conceptualizing human services integrated initiatives. In J. M. Marquart & E. L. Konrad (Eds.), *Evaluating initiatives to integrate human services*. San Francisco: Jossey-Bass.
- Lipton, D.S. (1995). *The effectiveness of treatment for drug abusers under criminal justice supervision*. Research Report. Washington D.C.: U.S. Department of Justice, National Institute of Justice.
- McClintock, C. (1998). *Healthy Communities: Concepts and Collaboration Tools, Summary Report, Cross-Agency Collaboration: Research Findings and Practitioner Experience*, New York State College of Human Ecology, Policy Perspectives.
- McDonald, D.C. (1995). *Managing Prison Health Care and Costs*, Research Report: Washington D.C.: U.S. Department of Justice, National Institute of Justice.
- McLellan AT, Lewis DC, O'Brien CP, Kleber HD (2000). Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. *JAMA*. 2000; 284:1689-1695.
- Mumola, C.J. (1999). *Substance Abuse and Treatment, State and Federal Prisoners in 1997. Bureau of Justice Statistics Special Report*. Washington, D.C.: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

- NIDA (1999). *Principles of Drug Addiction Treatment: A Research-Based Guide*, Washington, DC: U.S. Government Printing Office.
- Pelissier, B., & McCarthy, D. Evaluation of the Federal Bureau of Prisons Drug Treatment Programs. In: Leukefeld, C.G., & Tims, F.M., eds. *Drug Abuse Treatment in Prisons and Jails*. NIDA Research Monograph 118. Washington, DC: Supt. of Docs., U.S. Govt. Print Off., 1992. pp. 261-278.
- Peters, R.H. & Steinberg, M.L. (2000). Substance abuse treatment services in U.S. Prisons. In D. Shewan & J. Davies (Eds.), *Drugs and Prisons*. 89-116. London, U.K.: Harwood Academic Publishers.
- Prendergast, M.L. and Burdon, W.M. (2002). Integrated systems of care for substance-abusing offenders, in Leukefeld, C.G., Tims, F. and Farabee, D. (eds.). *Treatment of Drug Offenders: Policies and Issues* (pp. 11-126), New York, NY: Springer Publishing Co.
- Schorr, L.B. (1997). *Common Purpose: Strengthening families and neighborhoods to rebuild America*. New York: Doubleday.
- Sherman, L.W., Gottfredson, D. MacKenzie, D., Eck, J, Reuter, P. & Bushway, S. (1997). *Preventing Crime: What Works, What Doesn't, What's promising: Report to Congress*. Washington D.C.: Office of Justice Programs.
- Substance Abuse and Mental Health Services Administration Office of Applied Studies (2002). *Results from the 2001 National Household Survey on Drug Abuse: Volume I. Summary of National Findings*. Rockville, MD. Office of Applied Studies.
- Travis, J. (2000). *But they all come back: Rethinking prisoner reentry*. U.S. Department of Justice: Office of Justice Programs, National Institute of Justice.
- Wexler, H.K., Lipton, D.S., and Johnson, B.D. (1988). *A Criminal Justice System Strategy for Treating Cocaine-Heroin Abusing Offenders in Custody*. Washington, D.C.: U.S. Department of State.

Contributors

To This Issue

Scott A. Allen

Medical Program Director, Rhode Island Department of Corrections. M.D., Brown University. Author of "Treatment of Chronic Hepatitis C in State Correctional Facility," *Annals of Internal Medicine* (Feb. 2003).

Jeffrey A. Bouffard

Assistant Professor, North Dakota State University, Fargo. Ph.D., University of Maryland, College Park. Author of "Methodological and Theoretical Implications of Using Subject-Generated Consequences in Tests of Rational Choice Theory" (Dec. 2002).

William M. Burdon

Assistant Research Psychologist, UCLA Integrated Substance Abuse Programs. Ph.D., Claremont Graduate University. Author of "Prison-based Therapeutic Community Substance Abuse Programs: Implementation and Operational Issues," *Federal Probation* (Dec. 2002).

Timothy P. Cadigan

Senior Policy Analyst, Administrative Office of the United States Courts, Office of Probation and Pretrial Services. Previously, Technology and Analysis Branch Chief, Administrative Office of the U.S. Courts, Office of Probation and Pretrial Services. M.A., Criminal Justice, Rutgers University, New Jersey. Currently candidate for Ph.D. (ABD), Rutgers University. Author of "PACTSECM" in *Federal Probation* (Sept. 2001).

Peter J. Delany

Deputy Director, Division of Epidemiology, National Institute on Drug Abuse, National Institutes of Health. D.S.W., Catholic University of America, Washington, D.C. Co-author of "Special Issues in Treatment: Incarcerated Populations," in *Principles of Addiction Medicine*, 3rd Ed. (2003).

David S. DeMatteo

Behavioral Scientist, Treatment Research Institute, University of Pennsylvania. J.D., Villanova University School of Law; Ph.D., Hahnemann University. Co-author of *Forensic Mental Health Assessment: A Casebook* (2002).

Vitka Eisen

Associate Director of Criminal Justice Programs, Walden House, Inc. treatment center for substance abuse. Ed. D., Harvard University.

Bennett W. Fletcher

Senior Scientist, Division of Epidemiology, Services and Prevention Research, National Institute on Drug Abuse, National Institutes of Health. Ph.D., Texas Christian University. Co-author of "Special Issues on Treatment: Incarcerated Populations," in *Principles of Addiction Medicine*, 3rd Edition (2003).

Peter D. Friedmann

Associate Professor of Medicine and Community Health, Brown Medical School and Rhode Island Hospital. Previously, Assistant Professor of Medicine, University of Chicago. M.D., Boston University School of Medicine. Co-author of "Accessibility of Addiction Treatment: Results From a National Survey of Outpatient Substance Abuse Treatment Organizations," *Health Service Resources* 2003.

Tom F. Garrity

Professor, University of Kentucky. Ph.D., Duke University. Co-author of "Effects of Pet Contact on Human Wellbeing: Review of Recent Research," in *Companion Animals in Human Health* (1998).

James A. Inciardi

Professor and Director, Center for Drug and Alcohol Studies, University of Delaware. Ph.D., New York University. Author of *The War on Drugs III* (2002).

Carl G. Leukefeld

Center Director, University of Kentucky. Ph.D., Catholic University of America. Co-editor of *Relapse and Recovery Processes in the Addictions* (2001).

Mark D. Litt

Professor, University of Connecticut Health Center. Ph.D. in Psychology, Yale University. Co-author of "Coping Skills and Treatment Outcomes in Cognitive-Behavioral and Interactional Group Therapy for Alcoholism," *Journal of Consulting and Clinical Psychology* 71, 118-128 (2003).

T.K. Logan

Professor, University of Kentucky. Ph.D., Southern Illinois University. Co-author of "Substance Use and Intimate Violence Among Incarcerated Males," *Journal of Family Violence*, 16, 2, 93-114 (2001).

Sharon Mallon

Research Associate, Connecticut Department of Mental Health & Addiction Services, University of Connecticut. Ph.D., University of Connecticut. Co-author of "Methodological Trends in JP: 1970-1995," *Journal of Personality*, 66, 671-685 (1998).

Douglas B. Marlowe

Director, Section on Law & Ethics Research, Treatment Research Institute at the University of Pennsylvania. Ph.D. in clinical psychology, Hahnemann University; J.D., Villanova University School of Law. Author of "Effective Strategies for Intervening with Drug Abusing Offenders," *Villanova Law Review*, 47, 989-1025 (2002).

Steven S. Martin

Senior Scientist, Center for Drug and Alcohol Studies, University of Delaware. M.A., University of Michigan. Co-author of "HIV/AIDS Among Probationers: An Assessment of Risk and Results from a Brief Intervention," *Journal of Psychoactive Drugs* (in press).

Allison Mateyoke-Scriver

Research Analyst, University of Kentucky. M.A., Eastern Kentucky University. Co-author of "Employment Issues Among Drug Court Participants," *Journal of Offender Rehabilitation* (in Press).

Hope Smiley McDonald

Research Assistant, University of Kentucky. Previously, Research Analyst, Research Triangle Institute. B.A., Duke University. Co-author of "Employment, Employment-Related Problems, and Drug Use at Drug Court Entry," submitted to *Substance Use and Misuse* (In Press).

Nena P. Messina

Project Director, UCLA Integrated Substance Abuse Programs. Previously, Project Director, Bureau of Government Research. Ph.D., University of Maryland at College Park. Author of *The Antisocial Personality* (2002).

Daniel J. O'Connell

Research Associate, Center for Drug and Alcohol Studies, University of Delaware. M.A., University of Delaware. Author of "Investigating Latent Trait and Life Course Theories as Predictors of Recidivism Among an Offender Sample," *Journal of Criminal Justice* (2003).

Nicholas S. Patapis

National Institute Drug Abuse Clinical Research Fellow, University of Pennsylvania. Psy.D. in clinical psychology, Widener University. M.A. in criminal justice, Widener University.

Frank S. Pearson

Senior Project Director, National Development & Research Institutes, Inc. Ph.D., Rutgers University. Co-author of "The Effects of Behavioral/Cognitive-Behavioral Programs on Recidivism," *Crime and Delinquency* 48(3):476-96 (2002).

Bernadette Pelissier

TRIAD Project Director, Federal Bureau of Prisons. Ph.D., University of North Carolina, Chapel Hill. Co-author of "Gender Differences in Outcomes from Prison-Based Residential Treatment," *Journal of Substance Abuse Treatment* 24:1-12 (2003).

Michael L. Prendergast

Research historian, UCLA. Ph.D., University of California, Los Angeles. Author of "Involuntary Treatment Within a Prison Setting," *Criminal Justice and Behavior* (Vol. 29, no. 1, 2002).

Josiah D. Rich

Associate Professor of Medicine and Community Health, Brown University School of Medicine. M.P.H., Johns Hopkins University.

Stanley Sacks

Director, Center for the Integration of Research & Practice at the National Development & Research Institutes, Inc. Ph.D., University of Houston. Co-author of *Substance Abuse Treatment for Persons with Co-Occurring Disorders. Treatment Improvement Protocol (TIP)* (in press).

Joseph J. Shields

Associate Professor, The National Catholic School of Social Service, The Catholic University of America, Washington, D.C. Ph.D., The Catholic University of America. Co-author of "Special Issues in Treatment: Incarcerated Populations," in *Principles of Addiction Medicine*, 3rd Ed. (2003).

Beth Schwartzapfel

Senior Research Assistant, The Miriam Hospital. B.A., Brown University. Author of "A Review of the Case for Hepatitis B Vaccination of High-Risk Adults," *American Journal of Medicine* (March 2003).

Michele Staton

Project Director, University of Kentucky. M.S.W., C.S.W., University of Kentucky. Co-author of "Clinical Issues in Treating Substance Abusing Women," in *Clinical and Policy Responses to Drug Offenders* (in Press).

Faye S. Taxman

Director of the Bureau of Government Research, University of Maryland, College Park. Ph.D., Rutgers University, Newark, NJ. Author of *Reentry Partnership Initiative* (NIJ).

J. Matthew Webster

Assistant Professor, University of Kentucky. Ph.D., University of Kentucky. Co-author of "An Exploratory Examination of Spirituality, Religiosity, and Drug Use Among Incarcerated Men," *Journal of Social Work Practice in the Addictions* (in Press).

United States Government
INFORMATION

Order Processing Code

***5876**

Federal PROBATION

*a journal of correctional
philosophy and practice*

Please send me _____ subscription(s) to Federal Probation at \$16.50 each (\$22.40 foreign) per year. The total cost of my order is \$_____.

Price includes shipping and handling and is subject to change.

(PLEASE TYPE OR PRINT) NAME OR TITLE

COMPANY NAME

ROOM, FLOOR, OR SUITE

STREET ADDRESS

CITY

STATE

ZIP CODE + 4

DAYTIME PHONE INCLUDING AREA CODE

PURCHASE ORDER NUMBER (OPTIONAL)

Method of Payment

Check payable to: Superintendent of Documents

GPO Deposit Account _____

Credit Card

Visa

Master Card

Discover

CARD NUMBER

EXPIRATION DATE

AUTHORIZED SIGNATURE

FAX YOUR ORDER TO
202-512-2250

PHONE YOUR ORDER TO
202-512-1800

MAIL YOUR ORDER TO
Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954

IMPORTANT!
Please include your completed
order form with your remittance

*thank you for
your order!*



FEDERAL PROBATION

Administrative Office
of the United States Courts

Washington, DC 20544